HWG | HARRIS, WILTSHIRE & GRANNIS LLP

1919 M STREET NW
SUITE 800
WASHINGTON DC 20036

TEL +1 202 730 1300
FAX +1 202 730 1301
HWGLAW.COM

ATTORNEYS AT LAW

April 11, 2016

VIA ECFS AND EMAIL

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: ***Special Access for Price Cap Local Exchange Carriers, WC Docket No. 05-25, RM-10593***

Dear Ms. Dortch:

Pursuant to the following *Protective Orders*[1] in WC Docket No. 05-25, and the Commission's April 6, 2016 Public Notice[2] addressing the treatment of data that is derived from Highly Confidential and Confidential data in the data collection, Sprint Corporation respectfully submits the Revised Public Versions of the following documents:

- Sprint Corporation's Comments (originally filed Jan. 27, 2016) ("Attachment A");
- Declaration of Stanley M. Besen and Bridger M. Mitchell, appended as Attachment 1 to Sprint Corporation's Comments (originally filed Jan. 27, 2016) ("Attachment B");
- Declaration of William P. Zarakas and Susan M. Gately, appended as Attachment 2 to Sprint Corporation's Comments (originally filed Jan. 27, 2016) ("Attachment C");

---

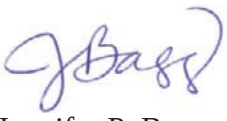
1 *See Special Access for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Data Collection Protective Order, 29 FCC Rcd. 11,657, ¶ 23 (Wireline Comp. Bur. 2014); *Special Access Rates for Price Cap Local Exchange Carriers*, Modified Protective Order, 25 FCC Rcd. 15,168 (Wireline Comp. Bur. 2010); *Special Access Rates for Price Cap Local Exchange Carriers*, Second Protective Order, 25 FCC Rcd. 17,725 (Wireline Comp. Bur. 2010); *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Protective Order, DA 15-1837, WC Docket Nos. 15-236 & 05-25, RM-10593 (Wireline Comp. Bur. rel. Dec. 4, 2015); *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Protective Order, DA 15-XXX, WC Docket Nos. 15-236 & 05-25, RM-10593 (Wireline Comp. Bur. rel. Dec. 4, 2015).

2 *Public Statements Derived from Highly Confidential Data Filed in Response to the Business Data Services (Special Access) Data Collection*, Public Notice, DA 16-368, WC Docket No. 05-25, RM-10593 (rel. Apr. 6, 2016).

- Sprint Corporation's Reply Comments (originally filed Feb. 19, 2016) ("Attachment D");
- Declaration of David Sappington, appended as Attachment 1 to Sprint Corporation's Reply Comments (originally filed Feb. 19, 2016) ("Attachment E");
- Cable Competition Ex Parte Letter (originally filed Mar. 24, 2016) ("Attachment F"); *and*
- Supplemental Declaration of William P. Zarakas, attached to Cable Competition Ex Parte Letter as Attachment A (originally filed Mar. 24, 2016) ("Attachment G").

Parties who are admitted to the *Protective Orders* in this proceeding can request a copy of the Highly Confidential or Confidential versions of the enclosed documents by contacting our office. Please contact me at 202-730-1322 if you have any questions regarding this submission.

Respectfully submitted,



Jennifer P. Bagg
HARRIS, WILTSHIRE & GRANNIS LLP
1919 M Street N.W.
The Eighth Floor
Washington, DC 20036
jbagg@hwglaw.com
Counsel to Sprint Corporation

ATTACHMENT A

REDACTED – FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

COMMENTS OF SPRINT CORPORATION

Charles W. McKee
Vice President, Government Affairs
Federal & State Regulatory
Chris Frentrup
Director, Senior Economist
Sprint Corporation
900 Seventh Street NW, Suite 700
Washington, DC 20001
(703) 433-3205

A. Richard Metzger, Jr.
Emily Daniels
Lawler, Metzger, Keeney & Logan, LLC
2001 K Street NW, Suite 802
Washington, DC 20006
(202) 777-7700

Paul Margie
Jennifer Bagg
Walter E. Anderson
V. Shiva Goel
Harris, Wiltshire & Grannis LLP
1919 M Street NW, 8th Floor
Washington, DC 20036
(202) 730-1300

Counsel for Sprint Corporation

January 27, 2016

EXECUTIVE SUMMARY

Dedicated broadband services are the foundation of our nation's information economy. These services, known at the Federal Communications Commission ("FCC" or "Commission") as "special access services," differ from consumer-grade broadband because they offer guaranteed connectivity at a guaranteed bandwidth. As a consequence, they are the single most important telecommunications service for connecting the buildings of small, medium and large businesses, schools, and local governments to competitive providers like Sprint for access to the Internet and other IP-enabled services. Furthermore, these dedicated broadband services are the connections that make the mobile Internet possible, by linking both the macro and micro base stations (*i.e.*, cell phone towers) that mobile carriers must deploy to keep up with surging consumer demand for data.

Because of the critical importance of dedicated broadband to our economy, the marketplace for special access services continues to be the linchpin of telecommunications competition in the Internet age. Wholesale special access services form the core of the networks that competitive telecommunications providers use to offer businesses and consumers an alternative to the broadband services sold by the incumbent local exchange carriers ("incumbent LECs") that dominate the marketplace. Of central importance to Sprint, these wholesale services are the essential links that connect wireless towers and access points to the Internet. Special access, roaming, and spectrum are the three critical inputs necessary to ensure that the wireless markets of the future are competitive.

Specifically, wireless carriers are faced with a rapid increase in demand for mobile data. Consumers expect access to increasing amounts of content wherever they are and on whatever device they are using. These expectations continue to rise. This means wireless carriers will

need to deploy a whole new generation of networks or "5G" networks that will provide unprecedented speed and capacity. While 5G will encompass numerous new technologies, there is general consensus that 5G will unquestionably demand a vast increase in the number of base stations. It has been estimated that carriers will need to deploy tens of thousands new transmitters to create the speed and capacity consumers are demanding from mobile networks. Each of these new transmitters will, in turn, require some form of dedicated broadband connection to the rest of the network.

The Commission has recognized the central importance of these dedicated broadband services to the nation's economy and that an unaddressed lack of competition for these connections would have dire consequences for the country. It therefore initiated this proceeding to "review[] [its] special access rules to ensure that they reflect the state of competition today and promote competition, investment, and access to dedicated communications services businesses across the country rely on every day to deliver their products and services to American consumers."[1] To gather the data it needed to answer this question, it undertook the most comprehensive data collection in the agency's history.

Today the public gains access to the results of this data collection, although in redacted form. After ten years of delay tactics, political pressure, and obfuscation, AT&T, Verizon, and other incumbent LECs can no longer deny what broadband purchasers have always known: There is inadequate competition to discipline incumbent LEC prices, and the FCC must act to repair the ongoing damage.

---

[1] *Special Access for Price Cap Local Exchange Carriers - AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16,318, ¶ 1 (2012).

The numbers are staggering. The incumbent LEC is the only provider of special access service of any capacity, from the lower-capacity connections that serve ATMs to the very highest capacity connections that serve whole factories, in a huge majority of locations—specifically in 73 percent of such locations. This means that in the vast bulk of buildings and cell towers where any business, school, government, or wireless transmitter needs dedicated broadband services of any type, the incumbent LEC is the only actual or potential provider. Most of our nation's buildings and cell towers have no competitive choice for the essential infrastructure in the 21st Century economy.

It gets worse. Even where the LEC is not the *only* provider of special access service, the market is still uncompetitive. In the small minority of locations where the incumbent faces any competition at all, most locations have only two actual or potential providers—specifically 97 percent of such locations. This means that even where there is a modicum of competition, purchasers almost always have "a choice of only two providers. That is what economists call a duopoly."[2]

As the FCC has previously correctly concluded, a single competitor is not sufficient to protect consumers from anticompetitive behavior, and the special access marketplace is no different. Competition economics theory recognizes that the presence of more than two competitors at a location is generally needed to represent effective competition, and the FCC has said that four providers are necessary. The Commission's new data demonstrate that there are four or more providers of any special access service, from the lowest to the highest capacity

[2] Tom Wheeler, Chairman, FCC, The Facts and Future of Broadband Competition, Prepared Remarks at the 1776 Headquarters, Washington, D.C. (Sept. 4, 2014).

products, only in a tiny percentage of locations nationwide—specifically in 1 percent of locations.

Examining the Commission's data using other competition-analysis tools yields consistent results. The Herfindahl-Hirschman Index ("HHI"), a commonly accepted measure of market concentration, confirms the findings described above. Based on the new data submitted in the record, the HHI exceeds the "Highly Concentrated" level in an astoundingly high number of census blocks—specifically 99 percent of all census blocks in which an incumbent LEC provides special access service of any capacity level, from the lowest capacity to the highest.

When one divides the overall marketplace for special access services into separate product markets, the data paint a similarly bleak picture. Not all special access services are considered to be substitutes by consumers, because some consumers need lower-capacity connections for credit-card swipe services or ATMs, while others need higher-capacity connections for cell towers or large businesses. In individual, capacity-based product markets, the data show incredibly high incumbent LEC market shares. The vast majority of special access lines are in the 0-10 Mbps or 10-50 Mbps product markets, specifically 88 percent. The data show that the incumbent LECs have near complete dominance of these product markets, with a market share of 85 percent.

Broken down further, in the 0-10 Mbps product market, the incumbent LECs' revenue share is an astounding over 82 percent. In the 10-50 Mbps product market, the incumbent LECs' share is still an incredible almost 80 percent. Even including the highest capacity product markets, where one might expect to see greater competition, incumbent LECs control more than 73 percent of all special access revenues.

The Commission's data collection has accomplished more than a demonstration of overwhelming dominance by the incumbent LECs. The collection has also resulted in every responding incumbent revealing that it employs "loyalty commitments" and other anti-competitive terms and conditions. Through these terms and conditions built into special access plans, it is now clear that incumbent LECs harness their market dominance to force purchasers into a "your money or your life" choice—either agree to competition-killing loyalty commitments (and the overage charges, shortfall payments, and inflated early termination payments that reinforce these commitments) or face business-killing rack rates or restrictions in service. While the decisions of each purchaser to accept a loyalty plan may be a rational response to anticompetitive behavior, the cost to the marketplace as a whole is high, as the barriers that new entrants face in attempting to win away customers that are locked into loyalty plans become considerably higher.

The data collection could have even shown more, had the incumbent LECs fully complied with the FCC's data requests. But they did not. The incumbent LECs have effectively hidden their level of dominance in particular geographic areas by failing to properly report the location of a large percent of their special access lines. Consequently, the levels of dominance demonstrated herein are almost certainly understated in certain geographic or product markets as a result of the incumbent LECs failure to fulfill their responsibility to provide the Commission with the data it requested.

Nonetheless, the FCC's extraordinary data collection has accomplished its goal. The Commission now has a solid foundation on which to act to repair the fundamentally broken special access marketplace. Now is the time to resolve this long pending proceeding. The FCC should take immediate interim action by: (1) returning services subject to Phase II pricing

flexibility to the price cap regime and taking steps necessary to include Ethernet services under the price cap regime, and (2) declaring anticompetitive loyalty commitments to be unenforceable because they are unjust and unreasonable, thereby providing purchasers with a "fresh look" so that they can avail themselves of competition in the few places where it exists today. The Commission must also implement long-term repairs to the special access regulatory system by: (1) establishing pricing benchmarks to adjust prices in areas where competition does not constrain prices; (2) revising the X-factor that accounts for the productivity gains that would lead to lower prices in a competitive market; and/or (3) using existing models that measure costs of service to set appropriate caps on prices.

Table of Contents

REDACTED – FOR PUBLIC INSPECTION

Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

COMMENTS OF SPRINT CORPORATION

Sprint Corporation ("Sprint") hereby submits these comments in response to the Federal Communication Commission's ("FCC" or "Commission") Report and Order and Further Notice of Proposed Rulemaking issued on December 18, 2012, in the above-captioned proceedings.[1] The Report and Order called for the mandatory collection of data from certain entities subject to the Commission's jurisdiction under the Communications Act of 1934, as amended (the "Act"), that provide or purchase special access services in price cap areas. Section IV.B of the Further Notice of Proposed Rulemaking accompanying the Report and Order sought comment on possible changes to its rules for the special access services provided by incumbent local exchange carriers ("incumbent LECs" or "ILECs") following review of the collected data.

---

[1] *Special Access for Price Cap Local Exchange Carriers - AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16,318, ¶ 1 (2012) ("*2012 R&O and FNPRM*").

I. INTRODUCTION AND SUMMARY

Guided by the Commission's traditional market power analysis, Sprint performed a comprehensive review of the data collected by the FCC. The results of Sprint's analysis corroborate the experience reported by every participant in the special access marketplace, aside from the incumbent LECs themselves. The numbers are staggering. At 73 percent of the locations where special access services are sold (*i.e.*, buildings and cell towers), the incumbent LEC is the sole provider. And even in the few locations where an alternative facilities-based provider exists, market concentration analysis confirms the absence of effective competition. Indeed, only a tiny 1 percent of locations benefit from enough facilities-based competition to adequately constrain incumbent LEC rates, terms, and conditions. The data also confirm the absence of potential competition, and show that incumbent LEC loyalty commitments enforced by outrageous penalties further limit the ability of competition to develop. These conclusions are undisturbed by the incumbent LECs' erroneous claim that a conveniently timed spate of cable-driven "competition" has magically rendered the Commission's data unusable—suddenly upending nearly a century of uninterrupted incumbent dominance of the special access marketplace.

In the sections that follow, Sprint explains why the Commission's proven traditional market power analysis is the best method for determining whether competition can constrain anticompetitive rates, terms, and conditions in the special access marketplace. Applying the first steps of this analysis, Sprint identifies the relevant product markets for special access services, concluding that (1) channel termination and channel mileage services are separate products, (2) the capacity of special access services, rather than the technology used to provide them, distinguishes one special access product from another from the perspective of the typical special access consumer, and (3) best efforts broadband is not a substitute for the dedicated services that

special access customers require. Sprint also urges the Commission to define relevant geographic markets with sufficient granularity in order to avoid contaminating its analysis with crude overstatements of available competition. As a part of this discussion, Sprint cautions the Commission to reject the fallacy at the heart of the incumbent LECs' claim that the special access marketplace is competitive: the misconception that the presence of *one* alternative supplier of *any* special access product *anywhere* proves the existence of effective competition for all products *everywhere*.

After identifying the elements of a sound analytical foundation for the Commission's analysis, Sprint explains its findings, which can be summarized succinctly. Incumbent LECs are the only providers of special access services at the vast majority of locations, retain overwhelming shares of the highly concentrated special access marketplace, and are unconstrained by both the limited competition they face today and the prospect that potential competition might emerge in the future. Sprint demonstrates that these findings are consistent with substantial additional evidence, including comprehensive studies performed by research bodies and other government agencies.

In subsequent sections, Sprint unpacks the data collection responses that address the incumbent LECs' use of anticompetitive terms and conditions. These responses confirm that the incumbents' terms and conditions function as loyalty commitments that lock up the existing and incremental demand for special access services, deter the entry of competitive providers, and limit the pace of technological progress in the special access marketplace, without producing any meaningful countervailing pro-competitive benefits. On this basis, Sprint concludes that the terms and conditions are unjust and unreasonable.

Sprint then explains the impact of the incumbent LECs' anticompetitive prices, terms, and conditions on the U.S. telecommunications system and the many sectors of our economy that rely on dedicated broadband access. The incumbent LECs' stranglehold on the special access marketplace is threatening technological progress, depressing broadband access and competition, and diminishing improvements in quality of service—all at a cost of billions of dollars to U.S. workers and lost output to our economy as a whole.

Sprint concludes by proposing several potential remedies that could mitigate these harms both now and in the long-run. To provide immediate relief, Sprint proposes that the Commission correct the unjust and unreasonable harms caused by a previous Commission's flawed predictive triggers—incorrectly identified areas of competition in the special access marketplace—and return services subject to Phase II pricing flexibility to the price cap regime. The Commission must also take immediate steps to bring Ethernet services under the price cap regime.

Further, Sprint urges the Commission to determine that anticompetitive loyalty commitments are unenforceable and allow purchasers of special access services a "fresh look" so that they can avail themselves of the limited competitive alternatives that exist today, as well as the potential alternatives that may emerge as regulatory reforms unlock the demand currently committed to the incumbent LEC. While this step will only help purchasers in a small number of locations, it is a useful first step and may serve as a foundation for generating more competition by freeing up demand from incumbent LEC lock-up schemes.

While these interim measures are positive preliminary measures for addressing the broken special access market, the Commission must act swiftly to implement a long-term regime to ensure that lasting competition is injected into the market. To assist in this process, Sprint urges the FCC to develop pricing benchmarks to adjust prices in areas where competition does

not constrain pricing. Alternatively, the Commission could consider revising the X-factor governing increases in special access pricing based on changes in growth rates over time. The Commission also could use existing models that measure the costs of service to set appropriate caps on prices. Properly implemented, each of these approaches would allow the Commission to limit the incumbent LECs' ability to charge unjust and unreasonable prices without threatening investment and innovation in special access services.

The comprehensive record that the FCC has amassed in this proceeding paints a bleak picture of the future of broadband in the United States absent immediate Commission action. Sprint therefore urges the Commission to act quickly to fix the broken marketplace that forms the core of our country's high-speed networks and the technological innovation they drive.

II. A TRADITIONAL MARKET POWER ANALYSIS SHOULD FORM THE FOUNDATION OF THE COMMISSION'S REVIEW OF THE SPECIAL ACCESS MARKETPLACE

The Commission has set out to ensure that the special access rules "reflect the state of competition today and promote competition, investment, and access to dedicated communications services [that] businesses across the country rely on every day to deliver their products and services to American consumers."[2] The FCC's well-understood, traditional approach to conducting a market power analysis is the best way for the Commission to fulfill this goal because it will allow the Commission to identify areas in which competition is sufficient to constrain carriers from "imposing unjust, unreasonable, or unjustly or unreasonably

[2] *Id.*

discriminatory rates, terms, and conditions, or from acting in an anticompetitive manner."[3] This traditional framework involves:

> [A] thorough analysis, which traditionally begins with a delineation of the relevant product and geographic markets, and then considers market characteristics, including market shares, the potential for the exercise of market power, and whether potential entry would be timely, likely, and sufficient to counteract the exercise of market power.[4]

There is widespread support in the record[5] for the Commission to again employ this analysis to determine whether the incumbent LECs continue to dominate the special access marketplace. The Commission adopted this proven market power framework years ago and has

---

[3] *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona, Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd. 8622, ¶ 37 (2010), *aff'd, Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012) ("*Qwest Order*" or "*Qwest*").

[4] *Id.* ¶ 28; *see also, e.g.*, *Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area*, Second Report and Order in CC Docket No. 96-149 and Third Report and Order in CC Docket No. 96-61, 12 FCC Rcd. 15,756, ¶¶ 28, 40-41 (1997) (explaining that the Commission determines whether a carrier is dominant by delineating the relevant product and geographic markets, identifying current or potential suppliers in that market, and determining whether the carrier in question possesses individual market power in that market); *Motion of AT&T Corp. to Be Reclassified as a Non-Dominant Carrier*, Order, 11 FCC Rcd. 3271, ¶¶ 38-73, 139 (1995) ("*AT&T Non-Dominance Order*"); *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd. 5662, ¶ 24 (2007) ("*AT&T-BellSouth MO&O*").

[5] *See, e.g.*, Comments of the New Jersey Division of Rate Counsel at 9, WC Docket No. 05-25 (filed Feb. 11, 2013) (supporting the use of the structural market analysis the FCC employed in *Qwest*) ("Rate Counsel Comments"); Comments of BT Americas Inc., Cbeyond Communications, LLC, EarthLink, Inc., Integra Telecom, Inc., Level 3 Communications, LLC, and tw telecom inc. at 64, WC Docket No. 05-25 (filed Feb. 11, 2013) ("The established market power framework is a reliable and efficient means of identifying the relevant special access markets in which incumbent LECs currently have the ability to set and maintain supra-competitive prices.") ("Joint CLEC Comments"); Comments of the Ad Hoc Telecommunications Users Committee at 8-9, WC Docket No. 05-25 (filed Feb. 11, 2013) ("Ad Hoc Comments"); Comments of XO Communications, LLC at 3-5, WC Docket No. 05-25 (filed Feb. 11, 2013) (The Commission's market power analysis "is widely accepted as the analytical framework that will most accurately determine whether and the extent to which competition exists.") ("XO Comments").

applied it in numerous contexts, including in the *Qwest* decision.[6] As the Commission has recognized, this analytical framework is "well-designed to protect consumers, promote competition, and stimulate innovation" and will help to ensure that the Commission's approach is "not only data-driven, economically sound, and predictable, but also reflects a forward-looking approach to competition and the best understanding of ways to appropriately tailor regulatory relief when it is justified."[7]

Other U.S. agencies and regulators in other countries have a long history of using the traditional framework to perform competition analyses.[8] For example, the Commission's market power analysis closely tracks the framework described in the Horizontal Merger Guidelines used by the Department of Justice and Federal Trade Commission.[9] Moreover, this approach has been upheld on judicial review. Notably, the Tenth Circuit Court of Appeals rejected Qwest's claim that "the Commission's assessment of competitive conditions in the Phoenix market was unreasonable," thereby sustaining the very same analytical approach Sprint suggests for this

---

6 *See, e.g.*, *Wireline Competition Bureau Seeks Comment on Applying the Qwest Phoenix Forbearance Order Analytic Framework in Similar Proceedings*, Public Notice, 25 FCC Rcd. 8013, ¶ 1 (2010) (explaining that the Commission frequently has used a traditional market power analysis to determine whether there is sufficient competition to render certain regulatory protections unnecessary) ("*Qwest Public Notice*"); *Qwest Order* ¶ 37 n.122 (disagreeing with "AT&T and Verizon that a market power approach … applies only to mergers").

7 *Qwest Order* ¶ 3.

8 *See, e.g.*, *id.* ¶¶ 1, 37 (noting that this approach is "comparable to the analysis used by the DOJ, FTC, and telecom regulators in other countries, including those in the European Community, to determine the extent of competition in a market").

9 *See, e.g.*, *Qwest Corp. v. FCC*, 689 F.3d 1214, 1221 (10th Cir. 2012) ("As the April 2010 public notice had hinted, the Commission 'return[ed] to a traditional market power framework,' an analytical approach employed in earlier proceedings and embodied in the FTC-DOJ Horizontal Merger Guidelines.").

proceeding.[10] The court concluded that the Commission had "offered an extensive discussion of its reasons for . . . adopting the market-power approach."[11] The Commission's best course of action is to follow the approach endorsed by the court and widely accepted as appropriate in this context.

Indeed, the Commission is now well positioned to use the data it has collected in this proceeding to perform a market power analysis in a way that is consistent with, and superior to, the analysis it performed in *Qwest*. As a group of joint CLECs outlined in the record, and as shown in our findings below, "[t]he 2013 data can be used in each step of this analysis,"[12] and should enable the Commission to perform a competitive analysis that is more comprehensive than the one it performed in *Qwest*. Specifically, when the Commission analyzed Qwest's market power in the Phoenix MSA, it lacked "data in the record by which to calculate market shares for any relevant wholesale loop product market,"[13] data "to identify the location of competitive local transport facilities or to calculate market shares for dedicated local transport,"[14] or information that would allow the Commission to evaluate "elasticity of demand, or whether any wholesale [or retail enterprise] competitors have comparable size, resources, or cost structure to Qwest."[15] The Commission's data collection in this proceeding provides the information needed to perform a similar, and in fact more robust, analysis.

---

10 *Id.* at 1227.

11 *Id.* at 1230.

12 Opposition of Birch Communications, Inc., BT Americas Inc., Integra Telecom, Inc., and Level 3 Telecommunications, LLC at 12, WC Docket No. 05-25 (filed Nov. 10, 2014) ("Joint Opposition").

13 *Qwest Order* ¶ 70.

14 *Id.* ¶ 76.

15 *Id.* nn.206, 230, & 260.

Parties in the record have already correctly recognized the value that the data collection will lend to the Commission's analysis:

> [I]nformation regarding the number of "Connections" owned by and "Dedicated Services" sold by the different service providers will assist the Commission in determining market shares. And information regarding the types of services competitors provide via their own physical connections to end users and competitors' build/buy guidelines will enable the Commission to assess whether potential entry would be timely, likely, and sufficient to counteract exercise of market power in the future.[16]

In addition, the Commission collected detailed information about the location of competitive special access facilities, which will enable a more comprehensive analysis of actual and potential competition,[17] as well as information that can be used to calculate market share.[18] In fact, this information will permit the Commission to conduct the most comprehensive market power analysis in its history.

III. THE COMMISSION'S MARKET POWER ANALYSIS MUST DEFINE THE RELEVANT PRODUCT AND GEOGRAPHIC MARKETS ACCURATELY

Under the *Qwest* analytical approach, an analysis of market power begins with the definition of the relevant product and geographic markets. Accurate market definitions ensure that FCC rules properly distinguish between competition that has the potential to discipline incumbent behavior and competition related to a different product or in a different location such that it cannot discipline incumbent behavior. Product and geographic markets that are too large would suggest more competitive discipline than what currently exists in the marketplace.

---

[16] Joint Opposition at 12-13.

[17] *See Special Access for Price Cap Local Exchange Carriers - AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access*, Order on Reconsideration, 29 FCC Rcd. 10,899, App. A § II.A.3-6, (2014).

[18] *Id.* App. A §§ II.A.15-16, II.B.8-10.

A. Relevant Product Markets

It is well settled that different special access services occupy different relevant product markets and therefore may require different regulatory treatment.[19] To determine whether two services belong in the same product market, the "fundamental question" is whether the prospect of a buyer substituting one service with another constrains the price of the first service.[20] Factors the Commission should consider when making this determination include differences in the technical characteristics of the services and the extent to which customers actually switch between the services.[21]

1. Services

Consistent with its prior decisions, the Commission should treat channel termination and channel mileage special access services as separate product markets. Channel terminations and local transport "constitute separate relevant product markets," because these two services perform different functions.[22] Channel termination services connect a single customer's

---

19 Declaration of Stanley M. Besen and Bridger M. Mitchell, ¶¶ 11-16, appended as Attachment 1 hereto ("Besen/Mitchell Decl.").

20 *Qwest Order* ¶ 56 (explaining that, in determining whether mobile wireless access is in the same market as wireline access, "[t]he fundamental question in a traditional product market definition exercise is whether mobile wireless access service constrains the price of wireline access service. These two services should be in the same relevant market only if the prospect of buyer substitution to mobile wireless access constrains the price of wireline access.").

21 *Unbundled Access to Network Elements - Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 193 (rel. 2005) ("*TRRO Order*"); Reply Comments of Sprint Nextel Corporation at 16-17, WC Docket No. 05-25 (filed May 31, 2013) ("Sprint Reply Comments").

22 *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18,290, ¶ 27 (2005); *see also, e.g.*, *AT&T-BellSouth MO&O* ¶ 30 (2007) (noting that "services provided over different segments of special access (*e.g.*, channel terminations and local transport) constitute separate relevant product markets"); Reply Comments of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel at 12, WC Docket No. 05-25 (filed

premises to an end office,[23] while channel mileage services involve "carrying traffic from one point of traffic concentration to another."[24] As a result, channel termination and channel mileage services are not substitutes for one another.[25]

Separately, the FCC should treat the TDM-based channel terminations and Ethernet special access services as one product market if they offer similar capacity levels. While incumbent LECs historically have separated the channel termination and channel mileage segments of a TDM-based special access circuit into distinct rate elements, newer technologies—such as Ethernet—may be offered at a single recurring charge that includes the price of both segments of a circuit that connect a customer premise with another termination point. Regardless of the service's rate structure, a dedicated Ethernet link is the last-mile connection to a customer premise and therefore is part of the same relevant product market as a

---

Mar. 12, 2013) ("Channel termination and channel mileage services are distinct products[.]") ("NASUCA/Rate Counsel March 2013 Reply").

[23] This functionality is the same regardless of whether the customer's location is a building or a cell tower. Accordingly, special access services that are used to backhaul wireless traffic should not be analyzed as part of a separate product market. *See, e.g.*, Comments of BT Americas Inc. at 23, WC Docket No. 05-25 (filed Jan. 19, 2010) ("Special access services used to connect cell towers to mobile operators' switching centers (*e.g.*, DS-1s) sit in the same product market as other equivalent special access services and should not be separated into a distinct product market. This was Ofcom's conclusion in the UK."); Comments of Sprint Nextel Corporation at 15-16, WC Docket No. 05-25 (filed Jan. 19, 2010) (suggesting that special access services used for backhaul are identical to other special access services, except that the geographic markets in which backhaul services are supplied may be less competitive than the geographic markets for other special access services, because many cell towers are located in remote geographic locations) ("Sprint 2010 Comments").

[24] *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order, 27 FCC Rcd. 10,557, n.201 (2012) ("*2012 Suspension Order*").

[25] Besen/Mitchell Decl. ¶ 11.

TDM-based channel termination for purposes of assessing competitive conditions.[26] The fact that Ethernet connections use a different protocol to transmit the same voice and data traffic carried over legacy facilities is irrelevant to the proper product market classification of Ethernet.[27] Moreover, the Wireline Competition Bureau implicitly recognized that Ethernet services are substitutes for TDM-based channel terminations when it questioned whether special access customers should be permitted to count Ethernet purchases toward their percentage commitments for TDM-based channel terminations.[28]

Finally, the Commission should exclude "best efforts" services from the definition of *any* special access product market. As many parties correctly have asserted, these services are not an

---

[26] There is no reason to use different analytical tools to evaluate the marketplace for TDM- and non-TDM-based services. *See* Comments of COMPTEL at 7, WC Docket No. 05-25 (filed Apr. 16, 2013) ("COMPTEL Comments"). As previously noted by COMPTEL, "[m]arket power concerns do not disappear merely because a market is evolving, particularly . . . here where [a] BOC can leverage its market power in 'legacy' services into the 'emerging' services." (internal citations omitted) *Id.* at 8. Accordingly, the standard for determining market power need not change based on the technology in question, especially because market structure will remain largely the same.

[27] *See, e.g.*, Sprint 2010 Comments n.8 ("The technology used to provide the connection (*e.g.*, TDM or Ethernet) is not relevant to the analysis.").

[28] *See Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Order Initiating Investigation and Designating Issues for Investigation, 30 FCC Rcd. 11,417, ¶¶ 56, 58, 70-71 (2015) ("*Designation Order*"); *see also, e.g.*, Reply Declaration of Dennis W. Carlton and Allan L. Shampine at 7 (Mar. 12, 2013) (attached to Reply Comments of AT&T, WC Docket No. 05-25 (filed Mar. 12, 2013)) ("[O]ther technologies such as Ethernet are being used as alternatives to special access."); Letter from Maggie McCready, Verizon Vice President Federal Regulatory Affairs, to Marlene H. Dortch, Secretary, FCC, at 1, WC Docket No. 05-25 (filed Feb. 5, 2015) ("Customers have increasingly turned to business Ethernet services, for example, and for a significant number of customers, Ethernet has become a substitute for DS1 and DS3 services.").

effective substitute for special access services and do not constrain the prices for such services.[29] For example, the Ad Hoc Telecommunications Users Committee aptly noted:

> [B]est efforts business broadband Internet access services are, well, best efforts—the antithesis of special access and the modern day equivalent of traditional switched voice service which may or may not be available (or too slow) when the network is busy. [Moreover,] special access services are services for which the customer, rather than the carrier, specifies the end points. . . . By definition, best efforts business broadband Internet access services take customers to the Internet and only to the Internet, via the carrier's choice of Internet access point; they cannot provide a dedicated connection between two premises designated by the customer, such as a bank ATM machine, a merchant's point-of-sale terminal, a secure data storage facility, or a cellular service tower.[30]

Sprint, as a wholesale purchaser of Ethernet to serve business customers, does not purchase best efforts Ethernet service. Among other concerns, best efforts services do not provide the quality of service necessary to meet business customer needs, such as the need for access to real-time voice or video. To the contrary, special access service is a dedicated, guaranteed bandwidth service, and therefore, the appropriate Ethernet substitute is dedicated Ethernet, not best efforts Ethernet. In short, the service functionality differences between special access offerings and best

---

[29] NASUCA/Rate Counsel March 2013 Reply at 13 ("The FCC should reject comments seeking to incorporate 'best efforts' broadband services in special access market analysis."); Joint CLEC Comments at 7, 49-57 (detailing the record evidence demonstrating that retail business customers that purchase special access services generally do not view best efforts broadband Internet access services as viable substitutes); Letter from Thomas Jones and Nirali Patel, Counsel, Cbeyond, Inc., Earthlink, Inc. and Integra Telecom, Inc., to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket No. 05-25 (filed Nov. 21, 2012) (citing "record evidence demonstrating that 'best efforts' broadband services are not a substitute for the dedicated broadband services at issue in the special access rulemaking proceeding . . .").

[30] Ad Hoc Comments at 12; *see also* Besen/Mitchell Decl. ¶ 16 ("services provided on a 'best-efforts' basis are not regarded by most purchasers as substitutes for special access dedicated circuits at guaranteed service levels").

efforts services are so significant that most customers simply do not consider the latter to be a realistic substitute for the former.[31]

2. Capacity

As explained above, the *technology* used to provide a particular special access connection is not relevant to the Commission's determination of whether that connection is part of a product market, unless that technology affects the characteristics of that connection in a way that changes customers' substitutability decisions. But the *capacity* of special access services creates important distinctions that warrant separate treatment because customers do not necessarily view low-capacity connections as substitutes for high-capacity connections. Therefore, in defining special access product markets, the Commission should continue to take into account differences in the capacity of connections.[32]

---

[31] *See, e.g.*, Declaration of Paul Schieber ¶¶ 4-5, attached as Attachment A to Comments of Sprint Nextel Corporation, WC Docket No. 05-25 (filed Feb. 11, 2013) ("Sprint Comments") (outlining the bandwidth limitations and other technical and performance shortcomings that prevent best efforts services provided over hybrid fiber coaxial ("HFC") networks from acting as viable substitutes for special access services); Letter from Joshua M. Bobeck, Counsel, PAETEC Holding Corp., and Thomas Cohen, Counsel, XO Communications, LLC, to Marlene Dortch, Secretary, FCC, at 24-25, WC Docket No. 05-25 (filed May 28, 2010) ("The available evidence in the record indicates that most customers of special access service [(*e.g.*, business customers)] do not view HFC-based services as substitutes for special access services because HFC networks are not capable of providing the features demanded by special access customers[,] such as guaranteed bandwidth and service level agreements."); Reply Comments of Cbeyond, Integra, One Communications and tw telecom at 11, WC Docket Nos. 06-172 & 07-97 (filed Oct. 21, 2009) ("[I]t is difficult if not impossible to deliver the guaranteed service levels demanded by business customers over shared networks, including HFC-based networks.").

[32] *See, e.g.*, *Qwest Order* ¶ 49 ("The Commission . . . has found that, in general, circuits of differing capacities . . . are likely to constitute separate relevant product markets. Consequently, we find it appropriate to distinguish product markets further based on capacity."); *AT&T-BellSouth MO&O* ¶ 30 n.94 (2007) ("[W]e find that, in general, different capacity circuits are likely to constitute separate relevant product markets[.]"); NASUCA/Rate Counsel March 2013 Reply at 12 ("[S]ervices with different capacities are distinct products."); Reply Comments of tw telecom inc. at 9, WC Docket No. 05-25 (filed

For example, DS1 and DS3 TDM-based channel termination and channel mileage services—and the Ethernet equivalents of these services—effectively are in separate product markets. This is the case because, at normally prevailing market prices, a small but significant increase in the DS1 price or Ethernet equivalent would not cause purchasers to shift to a DS3 or Ethernet equivalent service.[33] Moreover, competitive alternatives for the different capacities are likely to differ because, as the Commission has recognized, "[a] DS3 loop has 28 times the capacity of a DS1 loop, and thus offers a substantially greater revenue opportunity" than a DS1 loop.[34] This fact "forecloses an approach that would treat the different capacity facilities as though they were the same."[35]

With more flexible scalability due to a flatter cost structure, differentiation for higher-capacity services has become more nuanced as carriers employ newer packet-based technologies such as Ethernet products for dedicated access links, but Ethernet and DSn services remain in the same product market when they offer similar capacities. Specifically, carriers often use Ethernet interchangeably with lower-capacity TDM-based services such as DS1s and DS3s. Thus, Ethernet and TDM services with comparable capacities should be considered part of the same

---

Feb. 24, 2010) (noting that "the FCC must account for capacity and associated price differences in defining product markets" and that "a capacity-based approach is consistent with FCC precedent") ("tw telecom Reply Comments").

33 Besen/Mitchell Decl. ¶¶ 11-12.

34 *TRRO Order* ¶ 170.

35 *Id.*; *see also, e.g.*, Besen/Mitchell Decl. ¶¶ 12, 14; Peter Bluhm and Dr. Robert Loube, *Competitive Issues in Special Access Markets*, NAT'L REGULATORY RESEARCH INST., Revised Ed., at iii, v (first issued Jan. 21, 2009), attached to Letter from James Bradford Ramsay, National Association of Regulatory Utility Commissioners, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed June 12, 2012) (finding that "the level of competition varies by location, circuit capacity, and service component" and that the "FCC should . . . recognize that circuit capacity is an important variable in competition") ("NRRI Report").

product market. Further, where it is available, a special access customer currently may also choose to purchase a single Ethernet connection in lieu of purchasing multiple DS3 circuits. Therefore, the Ethernet equivalents of multiple DS3 circuits belong in the same product market as multiple DS3 circuits. The Commission implicitly recognized this substitutability when it mandated, as part of the IP transition, that incumbent LECs that seek to discontinue TDM-based special access services must then provide competitive carriers with a substitute (presumably IP-based) service "on reasonably comparable rates, terms, and conditions."[36]

At some point, when differences in capacity—and possibly in price—are large enough between two offerings, the FCC should consider them to be in different product markets because consumers would not regard them to be substitutes. This is true whether the two offerings are both DSn, both Ethernet, or whether they use different technologies—in other words, it is the capacity of the connection, rather than the technology used to deliver the capacity, that should drive categorization.

Of critical importance to this proceeding, however, is *if the incumbent LEC is the only facility-based provider of either TDM-based or Ethernet service at a given capacity level at a customer's location, it does not matter whether these services occupy different product markets for purposes of the FCC's analysis*. In this case, the incumbent LEC's control of any special access service product at the customer's location would result in a finding of market power, regardless of how the product market is defined.

---

[36] *Technology Transitions; Policies and Rules Governing Retirement of Copper Loops by Incumbent Local Exchange Carriers et al.*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 30 FCC Rcd. 9372, ¶¶ 6, 101 (2015) ("*Technology Transitions Release*").

B. Relevant Geographic Markets

The FCC's analysis of competitive conditions in special access marketplaces should use very granular geographic market definitions.[37] Both the Commission and Dr. Mitchell agree that the Commission's previous trigger, which granted incumbent LECs pricing flexibility relief on an MSA-wide basis, ignored the wide variability of competitive conditions across a large geographic area.[38] As a result, the incumbents were able to exploit their pricing flexibility to charge supra-competitive prices to wholesale and retail customers while also impeding new entry.

Using MSAs to analyze market power "can be highly misleading because these large areas often contain smaller geographic areas across which competitive conditions are widely disparate."[39] For example, the Commission concluded in the context of reviewing its unbundling requirements that "a geographic area as large as a MSA is so large and varied that such a grouping is prone to significantly overbroad impairment determinations . . . [and] would substantially over-predict the presence of actual deployment, as well as the potential ability to deploy."[40] In the same decision, the Commission observed that "MSAs are comprised of

---

37 Besen/Mitchell Decl. ¶¶ 19-21.

38 Declaration of Bridger M. Mitchell ¶ 33, appended as Attachment A to Sprint 2010 Comments, WC Docket No. 05-25 (filed Jan. 19, 2010) (noting that "the competitive alternatives available to customers in an MSA will rarely be uniform across the MSA") ("Mitchell Decl.").

39 Besen/Mitchell Decl. ¶ 17.

40 *TRRO Order* ¶ 82; *see also id.* ¶ 155 ("[A]n MSA-wide approach relying on objective, readily available data . . . would require an inappropriate level of abstraction, lumping together areas in which the prospects for competitive entry are widely disparate[.]"); *id.* ¶ 164 ("[A] single MSA can encompass urban, suburban, and rural areas, each of which presents different challenges to competitive LECs seeking to self-deploy high-capacity loop facilities or to obtain such facilities from an alternative wholesale provider. An impairment

communities that share a locus of commerce, but not necessarily common economic characteristics as they relate to telecommunications facilities deployment."[41] More recently, the Commission found that "MSAs have generally failed to reflect the scope of competitive entry," noting that "demand varies significantly within any MSA, with highly concentrated demand in areas far smaller than the MSA."[42]

To analyze the special access marketplace, the Commission must identify the area within which a special access customer would purchase a service from an alternative supplier (assuming one were available) if its current supplier increased the price of the relevant product.[43] In most cases, this area is limited to the customer's location, because "it would be prohibitively expensive for an enterprise customer to move its office location in order to avoid . . . increases in the price of special access services, and because there are significant entry barriers to putting competitive last-mile facilities into place."[44]

This granular geographic market analysis applies both to channel terminations and channel mileage. The customer's location is the appropriate geographic market for channel terminations because the "availability of competitive facilities varies from building to building"[45]

---

determination that applies to a geographic zone of this size is therefore likely to either over-estimate or under-estimate impairment.").

41 *Id.* ¶ 82.

42 *2012 Suspension Order* ¶¶ 35-36; *see also id*. ¶¶ 46-48 (outlining additional evidence that "an MSA is probably a much larger area than a competitor would typically choose to enter").

43 *Qwest Order* n.142.

44 *Wavecom Solutions Corporation, Transferor, and Hawaiian Telcom, Inc., Transferee, Applications for Consent to Transfer Control*, Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd. 16,081, ¶ 12 (2012).

45 *Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as Amended, for Forbearance from Certain Dominant Carrier Regulation of Its Interstate Access Service, and for Forbearance from Title II Regulation of Its Broadband*

and customers typically will not relocate their businesses simply to avoid a price increase.[46] Even in the instant proceeding, the Commission observed that "[c]ompetition in the provision of special access appears to occur at a very granular level—perhaps as low as the building/tower."[47]

Dr. Mitchell similarly has stated that:

> The Merger Guidelines' test suggests that the relevant special access geographic market for channel termination service is the building in which the customer is located. . . . A larger area—multiple buildings or the area served by a wire center—would be excessively large, because the customer's cost of switching to service available at a different building would not prevent the hypothetical monopoly supplier of the building from sustaining a price increase in that building.[48]

The GAO likewise found that "the extent of competitive entry in a market [should be analyzed] at the level of individual buildings."[49]

The relevant geographic market for channel mileage services must also be defined narrowly. As a practical matter, the only substitute for a customer with a channel mileage link that connects two central offices is a circuit provided by a competing supplier connecting the same points. Thus, the relevant geographic market for such services is route-by-route.[50]

Services, in the Anchorage, Alaska, Incumbent Local Exchange Carrier Study Area, Memorandum Opinion and Order, 22 FCC Rcd. 16,304, ¶ 35 (2007).

46 *See, e.g.*, *Qwest Order* ¶ 64 ("Consistent with Commission precedent, we reaffirm that each customer location constitutes a separate relevant geographic market, given that a customer is unlikely to move in response to a small, but significant and non[-]transitory increase in the price of the service.").

47 *2012 R&O and FNPRM* ¶ 22.

48 Mitchell Decl. ¶ 35; *see also* Besen/Mitchell Decl. ¶ 19.

49 UNITED STATES GOV'T ACCOUNTABILITY OFFICE, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO-07-80, at 19, 22 (Nov. 2006), http://www.gao.gov/products/GAO-07-80 ("GAO Report").

50 *See, e.g.*, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, et al*., Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16,978, ¶ 495 n.1536 (2003) ("[W]e define the relevant

Drs. Besen and Mitchell note, however, that even if the Commission chooses not to, or is unable to, analyze the data it has gathered on a location-by-location or route-by-route basis because of the nature of the data it has collected, it can still make well-founded conclusions about the state of competition. If an analysis of data across broader geographic areas than the customer's location still finds that incumbent LEC market power is extensive, that would be a clear indication of incumbent LEC dominance. This is the case because an analysis using larger geographic areas would over-estimate competition, meaning that a finding of market power using larger geographic markets would be even stronger proof of market dominance than using customer locations. The converse is not necessarily true, however. If the FCC conducts its analysis using geographic areas larger than the customer premises and finds an absence of market power, this finding could be due to the fact that it has overestimated competition by including competitors operating in areas too far from a customer to represent legitimate, actual, or potential competition.

IV. THE DATA COLLECTED BY THE COMMISSION CONFIRM THAT THE INCUMBENT LECS REMAIN DOMINANT IN THE PROVISION OF SPECIAL ACCESS SERVICES

After defining the relevant product and geographic markets, the next step in the traditional market assessment is to conduct a "thorough analysis . . . [that] considers market characteristics, including market shares."[51] Drs. Besen and Mitchell have performed that analysis in the attached report.[52] As the report demonstrates, the incumbent LECs, by any

---

geographic market for transport as route-by-route[.]"); Sprint Reply Comments at 18; Comments of TelePacific at 9, WC Docket No. 05-25 (filed Feb. 11, 2013) ("The Commission should analyze competition in the transport market on a route-by-route basis.").

[51] *2012 Suspension Order* ¶ 88; *see also, e.g.*, *Qwest Order* ¶¶ 38, 42 n.144.

[52] Drs. Besen and Mitchell carried out their analyses in conjunction with the Brattle Group and SMG consulting, who have filed a separate declaration that provides additional detail about

measure, continue to have market power in the provision of special access services. Notably, these findings are entirely consistent with the FCC's preliminary finding that "results from the Commission's data collection show that incumbent LECs remain the sole facilities-based provider of TDM-based special access services to a majority of business locations that demand or are likely to demand business data services nationwide."[53] As outlined below, the facts are undeniable and unquestionably probative of incumbent LEC market power: "[I]n the vast majority of the special access product and geographic markets, the incumbent LECs do not face effective competition."[54]

A. The Data Show that Incumbent LECs Are the Only Providers of Special Access Services in the Overwhelming Majority of Locations

Drs. Besen and Mitchell commenced their analysis by examining the first requirement for assessing competitiveness: identifying the number of carriers serving customers at locations within a defined geographic area. While this is only the beginning of the analysis, as the Commission has noted, analyzing information regarding where end user customers are connected "is critical in determining how and where competition for special access services exists or is likely to develop."[55]

In particular, Drs. Besen and Mitchell used the collected data to identify the number of facilities-based suppliers providing special access service at a particular location—*i.e.*, the

---

the data sources that they have employed and the calculations that they have performed. Declaration of William P. Zarakas and Susan M. Gately, appended as Attachment 2 hereto ("Zarakas/Gately Decl.").

53 *Designation Order* ¶ 4.

54 Besen/Mitchell Decl. ¶ 22.

55 *Special Access for Price Cap Local Exchange Carriers*, Report and Order, 28 FCC Rcd. 13,189, ¶ 20 (2013).

incumbent and competitive LECs that actually serve special access customers at buildings or cell towers using their own dedicated facilities.[56] The Commission previously has highlighted this important distinction. For example, the Commission specifically noted Qwest's failure to demonstrate actual or potential competition from competitors "that rely on their own last-mile connections to serve customers."[57]

Based on their review, Drs. Besen and Mitchell found that, at the vast majority of locations, the incumbent LEC is the only facilities-based provider of special access services—meaning that not one facilities-based competitive LEC has even a single customer at that location.[58] Specifically, they found that the incumbent LEC is the only provider of special access service in approximately 73 percent of locations.[59] At about 24 percent of locations, there are only two suppliers—the incumbent LEC and a competing carrier.[60] In other words, virtually all locations—97 percent—are served by only one or two suppliers.[61] Notably, there are three suppliers at 2 percent of locations and four or more suppliers at 1 percent of locations.[62]

Even at the broader census block level, fewer than 3 percent of census blocks contain three suppliers and fewer than 2 percent of blocks contain four or more suppliers.[63] Notably, this minute percentage still unquestionably *overstates* competition, because Drs. Besen and Mitchell

---

56 Besen/Mitchell Decl. ¶ 24.

57 *Qwest Order* ¶ 87.

58 Besen/Mitchell Decl. ¶¶ 25 (Table 1), 26.

59 *Id.*

60 *Id.*

61 *Id.*

62 *Id.*

63 Besen/Mitchell Decl. ¶¶ 27 (Table 2), 28.

conservatively treated all competitive LECs that offer service at a single location in the census block as providing service to the entire census block for purposes of their analysis. As they note:

> [T]his approach is likely to overstate potential competition at many purchaser locations. The provision of service to some purchasers in a census block is not necessarily an indication that a competitor can serve all buildings in that census block, or even that the "potential competitor" provides the same special access service as the ILEC.[64]

Drs. Besen and Mitchell also reviewed information compiled by the Commission from the facility maps submitted by the competitive LECs. As they note, however, use of this data "would be inappropriate for purposes of assessing potential competition."[65] Notably, a competitive LEC with transport facilities that simply traverse a census block would be shown as present in that census block, even though it is not offering service to a single location within that block. Moreover, as Drs. Besen and Mitchell note, a competitive LEC's network facilities often may be located at such a distance from the customer that the competitive LEC "would be unable to recoup the costs of extending its network facilities from future sales."[66]

Based on their analysis, Drs. Besen and Mitchell conclude that "the vast majority of special access product and geographic markets are not effectively competitive."[67] This conclusion is based on their view that several suppliers—"likely [] four—and certainly more than two"—that actually compete with one another in a limited geographic area (*i.e.*, the incumbent LEC and at least two or more competitors) "are needed to give a competitive outcome

---

64 *Id.* ¶ 29.

65 *Id.* ¶ 30.

66 *Id.*

67 *Id.* ¶ 9; *see also* ¶ 31.

in the special access markets under consideration in this proceeding."[68] The difference between using a "three competitor" standard versus a "four competitor" standard would not lead to materially different results.[69] In either case, the necessary criterion would be met at only an extremely small number of locations across the country—about 3 percent of locations.[70]

B. The Data Show that Incumbent LECs Retain Overwhelming Shares of the Special Access Marketplace

As noted, even the presence of a competitor at nearby locations overestimates the extent of competition. This is because, as Drs. Besen and Mitchell point out, the mere presence of a competing special access provider in proximity to a customer location does not mean that the firm has succeeded in attracting significant market share away from the incumbent provider. Thus, to present a more accurate view of the competitive landscape for special access services, they deepened their analysis by measuring both the volume of the carriers' sales as calculated by bandwidth and the revenues they obtained. Their conclusions again corroborate what nearly every purchaser of special access has known for years about the commercial reality of this marketplace: in the vast majority of locations, market forces are unable to prevent incumbent LECs from assessing unjust and unreasonable rates and terms.

Bandwidth-Based Concentration. Drs. Besen and Mitchell began by calculating Herfindahl-Hirschman Index ("HHI") values based on bandwidth-based market shares. These

---

[68] Besen/Mitchell Decl. ¶ 47. As noted in the Declaration, this finding is based on economic literature, as well as prior findings of both the Commission and the Department of Justice. *Id*. ¶¶ 31, 45-46. As Drs. Besen and Mitchell recognize, "the exact number may be different in different industries, based on their different cost and demand characteristics." *Id*. ¶ 47; *see also* ¶ 47, n.37.

[69] *Id.* ¶ 31 ("Our conclusion, however, would be little changed if instead we had assumed that only three competitors were sufficient to achieve competitive outcomes.").

[70] *Id.* ¶¶ 25 (Table 1), 26.

figures confirm overwhelming incumbent LEC dominance, demonstrating that the HHI exceeds the level characterized by the antitrust agencies as "Highly Concentrated"[71] in an enormous more than 99 percent of census blocks in which an incumbent LEC provides special access services, "in most by a very substantial amount."[72] Specifically, the HHI in census blocks in which an incumbent LEC provides special access service is:

- 10,000 in about 82 percent of census blocks;
- Between 7,500 and 10,000 in about 11 percent of census blocks;
- Between 5,000 and 7,500 in about 5 percent of census blocks; and
- Between 2,500 and 5,000 in less 1 percent of census blocks.[73]

Amazingly, even in census blocks where the incumbent LEC is not the sole supplier of special access services, the HHI again exceeds the threshold for being deemed "Highly Concentrated" in more than 99 percent of the blocks.[74]

Drs. Besen and Mitchell also used the bandwidth-based information to perform a bandwidth share analysis and again found that the incumbent LECs remain dominant in the overwhelming majority of census blocks in which they provide service. Specifically, incumbent LECs are the sole providers of special access services in 72 percent of all census blocks.[75]

---

71 U.S. DEP'T OF JUSTICE AND FED. TRADE COMM'N, *Horizontal Merger Guidelines*, §§ 5.1-5.3 (Aug. 19, 2010), http://www.justice.gov/atr/horizontal-merger-guidelines-08192010 ("*Horizontal Merger Guidelines*").

72 Besen/Mitchell Decl. ¶¶ 36 (Table 3), 37.

73 *Id*.

74 *Id.* ¶¶ 36 (Table 3), 38. Specifically, Drs. Besen and Mitchell found that, in all census blocks where special access service is provided by either a competitive LEC *or* an incumbent LEC, the HHI is 10,000 in around 84 percent of census blocks; between 7,500 and 10,000 in around 10 percent; and between 5,000 and 7,500 in around 5 percent. *Id.*

75 Besen/Mitchell Decl. ¶ 28 n.45.

Revenue-Based Shares. Drs. Besen and Mitchell also calculated revenue-based market shares for each of the major incumbent LECs, both for all special access services sold and for special access offerings of differing capacities. Their findings once again demonstrate incumbent LEC dominance—"the weighted-average ILEC share of revenues of all special access services combined is about 74 percent with a relatively small variation among carriers."[76] Moreover, because these figures were calculated at the incumbent LEC footprint level,[77] these shares are "likely to overestimate competition in many smaller geographic areas."[78]

The vast majority of special access lines are in the 0-10 Mbps or 10-50 Mbps product markets, specifically 88 percent.[79] The data show that the incumbent LECs have near complete dominance of these product markets, with a market share of 85 percent.[80] When disaggregated further by bandwidth "buckets," incumbent LECs account for around 82 percent of special access revenues for 0-10 Mbps service, around 80 percent for 10-50 Mbps, around 62 percent for 50-200 Mbps, around 68 percent for 200-800 Mbps, and around 53 percent for bandwidths greater than 800 Mbps.[81] As discussed below, and as Drs. Besen and Mitchell note, however, "the fact that CLECs have captured a portion of revenues from the provision of special access

---

76 *Id.* ¶¶ 39 (Table 4), 40.

77 This analysis was performed at the footprint level because the incumbent LECs failed to provide required information regarding a substantial number of customer locations. *Id.* ¶ 34 n.52. While some of these locations presumably are interoffice transport with no identifiable location, the incumbent LECs also allege in their "explanatory notes" that they have no way of knowing the locations of many of the customers that they serve. As a result, Drs. Besen and Mitchell were "unable to calculate revenue-based market shares revenues at a more granular geographic level at this time." *Id*.

78 *Id.* ¶ 42.

79 *See* Zarakas/Gately Decl. ¶ 17.

80 *Id.*

81 Besen/Mitchell Decl. ¶¶ 40 (Table 5), 41.

services should not be interpreted to mean that they act as a significant constraint on ILEC prices for those services."[82]

***

The conclusions to be drawn from the analyses outlined above are clear:

(1) At the vast majority of locations where special access is sold, the incumbent LEC is the only facilities-based provider with any customers.[83] Even in the few locations (or even census blocks) where there is any competition, there generally is only a duopoly that plainly does not ensure the results that a competitive marketplace would produce.

(2) An HHI and revenue analysis confirms incumbent LEC dominance: more than 99 percentof census blocks in which special access services are sold qualify as "Highly Concentrated,"[84] and the incumbent LECs hold an extraordinarily high revenue-based share of about 74 percent of the special access marketplace.[85]

(3) Even in the few census blocks where incumbent LECs face some competition, they "still continue to capture a very large share of all special access service volumes in the great majority census blocks, which is a further indication of the limited competition that they often face."[86]

Indeed, whether one examines the number of competitive suppliers in the relevant geographic and product markets, or the volume or revenue-based market shares that competing suppliers have captured, the overriding conclusions are inescapable: the special access marketplace is highly concentrated, and the incumbent LECs are the dominant providers of special access services throughout the country.

---

82 *See infra* at section V.C.; *see also* Besen/Mitchell Decl. ¶ 41.

83 Besen/Mitchell Decl. ¶ 42.

84 *Id.* ¶¶ 36 (Table 3), 38.

85 *Id.* ¶¶ 39 (Table 4), 40.

86 *Id.* ¶ 42.

V. CONTRARY TO CLAIMS BY THE INCUMBENT LECS, NEITHER ACTUAL NOR POTENTIAL COMPETITION CONSTRAINS THEIR DOMINANCE

As a further step in its traditional competition analysis, the Commission considers the "potential for the exercise of market power, and whether potential entry would be timely, likely, and sufficient to counteract the exercise of market power."[87] The incumbent LECs likely will continue to insist that the presence of *any* current or potential competing provider of *any* product in *any* location is sufficient to discipline prices and terms. But this is certainly not the case. Effective competition requires the presence of an adequate number of rival firms who are capable of providing the products that consumers want. As Drs. Besen and Mitchell show, the incumbent LEC is the only provider with facilities at over 70 percent of locations, and there is only the incumbent LEC or one other provider present in the overwhelming majority of the considerably larger census block areas.[88] Even in the latter areas, the presence of a competing provider in one part of a census block does not mean that the carrier is able or willing to compete against the incumbent LEC in all parts of the block. Furthermore, the number of locations where there are three or more providers of special access services is an exceptionally small 3 percent and is too rare of an occurrence to correct a fundamentally broken market.[89] Put simply, the data demonstrate that effective competition simply does not exist in the special access marketplace.

A. Incumbent LEC Claims Regarding the Importance of Limited Market Entry by Competitive Suppliers Are Vastly Overstated

As outlined above, the data demonstrate that there most often are *no* competing suppliers at a location to which buyers could shift their purchases in response to a price increase by the

---

87 *2012 Suspension Order* ¶ 88; *see also, e.g.*, *Qwest Order* ¶¶ 38, 42 & n.144.

88 Besen/Mitchell Decl. ¶¶ 25 (Table 1), 26, 27 (Table 2), 28.

89 *Id.* ¶ 25 (Table 1), 26.

incumbent LEC.[90] Even when a competitive supplier is present, however, Dr. Besen has established that a single competitor generally is insufficient to discipline a firm's conduct.[91] A duopoly simply does not ensure that marketplace forces will lead the firms involved to compete vigorously. As the Commission aptly noted in *Qwest*, the assumption "that a duopoly always constitutes effective competition and is necessarily sufficient to ensure just, reasonable, and nondiscriminatory rates" is "inappropriate[]."[92]

Considering a duopoly to constitute effective competition would be particularly misguided in the special access marketplace. Even where competitive facilities and substitute services are available, the ability of a special access customer to switch to another provider frequently is constrained by other considerations.[93] For example, incumbent LECs use

---

90 *See, e.g.*, *Special Access Rates for Price Cap Local Exchange Carriers - AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 1994, ¶ 97 (2005) ("Supply responsiveness measures the ability of carriers, other than the price cap LEC, to supply enough capacity to respond to demand migrating from the price cap LEC's network in the event of a LEC price increase for its special access services.") ("*2005 Order & NPRM*").

91 *See generally* Declaration of Dr. Stanley M. Besen, attached to Letter from Andrew L. Lipman, Counsel, TDS Metrocom et al., and Thomas Jones, Counsel, Cbeyond et al., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 08-24 (filed Apr. 23, 2009). This Declaration states that "a wide variety of theoretical models recognize, and even predict, that duopoly more typically leads to higher prices than would prevail in a market with a larger number of firms and that the entry of additional firms would result in lower prices." *Id.* at 2.

92 *Qwest Order* ¶ 29.

93 Mitchell Decl. ¶ 66 (A customer may be "constrained by the terms and conditions of existing contracts, or by the transaction costs of migrating circuits to a service if the alternative is available at only a few end offices."); *see also, e.g.*, Reply Comments of the New Jersey Division of Rate Counsel at 16-17, WC Docket No. 05-25 (filed Feb. 24, 2010) (Demand "elasticities are low – purchasers' ability to switch to alternative suppliers depends on the presence of such suppliers and the quality of the substitute, as well as the cost of switching to [an] alternative supplier. Contracts that lock customers into certain volumes or time periods raise the cost of changing providers.") ("Rate Counsel Reply Comments").

"exclusionary purchase arrangements" that are "likely to substantially diminish a customer's willingness to switch service providers in response to a price increase by the incumbent LEC."[94] As explained in detail in section VII *infra*, these "lock-up" and other anticompetitive terms often effectively prevent a customer from taking advantage of new competing service offerings.[95]

Understanding that, at most locations, the incumbent LECs face no facilities-based competitors, and that most of the areas where there is any competition are duopolies, is important. This is because the incumbent LEC's central argument is that a lone knight—the cable industry—has single-handedly converted their monopoly into a vigorously competitive marketplace by creating a duopoly in the small percentage of census blocks where they have special access customers.

In a set of recent *ex partes,* notable both for their vigorous hand waving and exceptionally contrived arguments, several incumbent LECs made the extraordinary claim that special access

---

94 Joint CLEC Comments at 67.

95 *See, e.g.*, Petition of Ad Hoc Telecommunications Users Committee, BT Americas, Cbeyond, Computer & Communications Industry Association, EarthLink, MegaPath, Sprint Nextel, and tw telecom to Reverse Forbearance from Dominant Carrier Regulation of Incumbent LECs' Non-TDM-Based Special Access Services at 52, WC Docket No. 05-25 (filed Nov. 2, 2012) ("Even at the few locations where competitive facilities are available, . . . incumbent LECs often impose terms and conditions in their special access tariffs and commercial agreements that limit a customer's ability to switch from non-TDM-based or TDM-based special access services provided by the incumbent LEC to non-TDM-based special access services provided by a competitor.") ("Petition to Reverse Forbearance"); Mitchell Decl. ¶ 21 ("Requirements that a customer commit to purchasing nearly all of its special access service from the incumbent LEC, reduce purchases from incumbent LEC competitors, and pay very substantial penalties for deviating from committed quantities tend to lock customers into the incumbent LEC supplier."); Reply Declaration of Joseph Farrell on Behalf of CompTel, appended as Attachment to Reply Comments of CompTel, Global Crossing North America, Inc. and NuVox Communications ¶ 3, WC Docket No. 05-25 & RM-10593 (filed July 29, 2005) ("[C]ompetitive entry generally has been restricted to the highest capacity services provided in dense metropolitan areas.") ("Farrell Decl."); Rate Counsel Reply Comments at 16-17 ("Contracts that lock customers into certain volumes or time periods raise the cost of changing providers.").

services became competitive overnight (or at least since 2013, the time period for which the data were collected). Conveniently, the incumbent LECs argue that the competition arrived at the very moment when the Commission and parties began to analyze the collected data. Unsurprisingly, these claims do not withstand scrutiny. For example, USTelecom alleged that the special access marketplace has become competitive after learning of Comcast's plans to offer customized communications networks for large enterprise customers.[96] Comcast's latest enterprise offering, however, relies heavily on partnerships with other providers that have existing facilities, rather than on the construction of new facilities in markets that currently are dominated by an incumbent LEC. Even if Comcast's announcement could be read to signal a rapid rise in facilities-based retail competition, it is important to note that it provides absolutely no indication that Comcast plans to expand its provision of *wholesale* special access.

Likewise, Verizon would have the Commission believe that Comcast's provision of special access services is sufficient to drive down incumbent LEC prices and preclude anticompetitive terms.[97] The facts and figures that Verizon cites, however, are drawn from a Comcast Business brochure that, when viewed in its entirety, confirms that Comcast's dedicated broadband coverage is dwarfed by that of the incumbent LECs.[98] Verizon also points to carefully selected advertisements by other cable and competitive providers as proof that its

---

96 Letter from Jonathan Banks and Diane Griffin Holland, USTelecom, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Sept. 18, 2015).

97 *See* Profile of Enterprise Broadband Providers at 1, appended as App. to Letter from Curtis L. Groves, Verizon, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Sept. 24, 2015).

98 *Id.* (Comcast Business networks span 141,000 miles of fiber). In the first quarter of 2015, AT&T reported that its fiber network alone spanned 1,011,227 miles (most of which are located in the United States). *See* AT&T, *1Q2015: AT&T by the Numbers* (2015), https://www.att.com/Common/about_us/pdf/att_btn.pdf.

dominance of special access has ended. But even if all of these advertisements represented real competitors—even added together—all of these companies' special access services would yield only a small fraction of Verizon's market share, and certainly not enough to discipline incumbent LEC behavior.

The incumbent LECs' arguments boil down to the assertion that the FCC need not act to reform the broken special access market simply because marketing materials suggest there may be *one* competitive entrant for *one* special access product in *some* geographic areas. This assertion unquestionably is incorrect, and the FCC should ignore the incumbent LECs' attempt to obscure the facts.[99]

B. There is Inadequate Potential Competition to Serve as an Adequate Check on the Incumbent LECs' Dominance

The data fully account for potential competition and demonstrate that potential competition alone is insufficient to check the incumbent LECs' anticompetitive behavior in the special access marketplace. As noted above, the incumbent LEC is the only special access service provider at the vast majority of customer locations. Dr. Mitchell has recognized that, "[in a building or other location where there are no competitive facilities, the customer typically has little opportunity to switch to an alternative supplier, and so the demand elasticity faced by the incumbent LEC is lower than in buildings where a competitor supplies service."[100] In the larger

---

[99] Given the inaccuracy of previous predictions of future competition, the Commission should be extremely reluctant to base a finding of non-dominance on the promise of potential competition. *See Qwest Order* ¶¶ 33-36; *2012 Suspension Order* ¶ 1 (explaining that the existing pricing flexibility rules "are not working as predicted"); *see also id.* ¶¶ 3, 5.

[100] Mitchell Decl. ¶ 67. To measure demand responsiveness, "economists traditionally . . . identify[] other special access options, relevant to that particular market, that are close substitutes, and determin[e] whether consumers are impeded from switching to these substitutes." *2005 Order & NPRM* ¶ 94; *see also, e.g.*, *Revisions to Price Cap Rules for AT&T*, Report and Order, 10 FCC Rcd. 2962, ¶ 20 (1995). High demand elasticity indicates

census block, there still is no competing provider in a substantial number of blocks, meaning that the potential for competitive entry is remote.

Even when a limited number of competitors are present, potential competition to supply customers at that location *may* exist when there are suppliers with facilities that offer service at nearby buildings. The number of these nearby suppliers—and their market share in the same census block—therefore may give an indication of potential competition for service at the location. Of course, even this measure significantly overstates the potential for competitive entry, because the "provision of service to some purchasers in a census block is not necessarily an indication that a competitor can serve all buildings in that census block, or even that the 'potential competitor' provides the same special access service as the ILEC."[101] For example, even when a competitive LEC offers a particular service to a limited number of locations in a census block, its fiber may be located too far away from the majority of buildings in the block to be deemed a potential competitor at all locations within the census block.[102] The Commission

---

that "the particular service market is subject to competition." *Comsat Corporation Petition Pursuant to Section 10(c) of the Communications Act of 1934, as amended, for Forbearance from Dominant Carrier Regulation and for Reclassification as a Non-Dominant Carrier*, Order and Notice of Proposed Rulemaking, 13 FCC Rcd. 14,083, ¶ 71 (1998). (Demand elasticity "refer[s] to the willingness and ability of [an incumbent LEC's] customers to switch to another telecommunications service provider or otherwise change the amount of services they purchase from [the incumbent LEC] in response to a change in the price or quality" of the incumbent LEC's service.).

[101] Besen/Mitchell Decl. ¶ 29.

[102] *See, e.g.*, tw telecom Reply Comments at 11-12 ("[T]he entry barriers to facilities-construction are particularly high. As a result, and because of real-world capital constraints, competitors can build fiber laterals to a small number of additional buildings each year."); Comments of PAETEC Holdings Inc.; TDS MetroCom, LLC; U.S. TelePacific Corp.; MPower Communications Corp.; Masergy Communications, Inc.; and New Edge Network, Inc. at 43, WC Docket No. 05-25 (filed Jan. 19, 2010) ("For many of the same reasons why new entry is unlikely, existing competitors are also unlikely to be able to add new capacity quickly to serve locations where they have not already deployed facilities, even in response to anti-competitive practices or pricing from the incumbent provider."); Declaration of

itself noted this issue when it suspended the application of the existing special access triggers, finding that "collocations . . . are not a reliable indicator of the presence of actual or potential competition in the provision of channel terminations."[103]

For potential competition to be effective, providers must be able to enter quickly and without large, up-front investments.[104] The special access marketplace satisfies neither requirement. As the Commission has observed, "most of the cost of providing a service access line is in the support structure, *i.e.*, trenches, manholes, poles and conduits, and rights of way, and access the building.[105] These expenses are in addition to the cost of the cable itself.[106] The tremendous sunk costs involved in entry are particularly daunting in the special access marketplace because the only way for a firm to compete against the incumbent LEC often is "to enter the market at a large scale and in many geographic areas."[107] A customer who requires

---

Bridger M. Mitchell and John R. Woodbury, CRA International ¶ 78 (dated July 26, 2005), appended as Attachment 1 to the Reply Comments of Nextel Communications, Inc., WC Docket No. 05-25 (filed July 29, 2005) ("[M]ere proximity to CLEC fiber fails to account for the frequently substantial costs of connecting data loops to the existing CLEC facilities.").

[103] *2012 Suspension Order* ¶ 77.

[104] Comments of the NoChokePoints Coalition at 12, WC Docket No. 05-25 (filed Jan. 19, 2010) ("Competitive providers can discipline ILEC competitive behavior, however, only if they can quickly and inexpensively extend capacity to provide competition to ILEC-serviced buildings and cell sites.") ("NoChokePoints Comments"); *see also, e.g.*, *id*. at 13 ("For potential competition to be capable of restraining the conduct of an incumbent with a large market share[,] the market cannot be one in which a competitor must make large sunk cost investments.").

[105] *2005 Order & NPRM* ¶ 26; *see also, e.g.*, Sprint Reply Comments at 36-37.

[106] *See, e.g.*, Rate Counsel Reply Comments at 18 ("Expanding networks to reach new locations and to provide channel terminations requires a competitor to incur significant sunk costs (installing new cable or microwave facilities); rights of way, construction costs, administrative costs; [and] expanding supply of interoffice transport also requires costs (installation of collocation facilities; installing new cable).").

[107] Mitchell Decl. ¶ 21; *see also* Comments of XO Communications, LLC at 15, WC Docket No. 05-25 (filed Feb. 11, 2013) ("As a practical matter, XO cannot transition its circuits at the

service at multiple locations otherwise might find it uneconomic to switch a small percentage of its lines to a provider that serves only a few sites. In addition, the incumbent LECs are both competitors with, and suppliers to, new providers and thus, have an incentive to "raise entrants' costs by charging high prices for interconnection, network elements and services."[108]

A potential competitor also would have to surmount the considerable obstacles presented by the incumbent LECs' competition-suppressing terms and conditions. To do so, a potential provider's only option would be "to offer uneconomically low prices to overcome the substantial penalties buyers would face if they were to shift even a small percentage of their purchases to alternative vendors."[109] As NASUCA aptly notes, "[b]y essentially freezing demand through the imposition of hefty penalties for failure to meet volume or term discounts, ILECs prevent the very competition they contend is imminent or 'potential.'"[110]

Finally, a potential entrant would have to compete against the incumbent LECs' entrenched advantages. As the Commission has noted, "markets where a price cap LEC owns or has access to important assets or resources that are not accessible to the potential entrant bestows an absolute advantage on the incumbent."[111] The record in this proceeding contains ample

---

expiration of a price cap LEC agreement to other providers. Of paramount importance, no competitor could support the circuits as a whole, given that only the price cap LEC has the facilities in place with the reach to meet XO's needs in many locations.").

[108] *Applications of Ameritech Corp., Transferor, and SBC Communications Inc., Transferee, For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95 and 101 of the Commission's Rules*, Memorandum Opinion and Order, 14 FCC Rcd. 14,712, ¶ 107 (1999).

[109] Sprint Comments at 24.

[110] NASUCA/Rate Counsel March 2013 Reply at 17.

[111] *2005 Order & NPRM* ¶ 107.

evidence of the first-mover advantages that incumbent LECs possess in the provision of special access services. For example, the incumbent LECs already have deployed network facilities capable of providing special access service to virtually every commercial building in their footprints, permitting the incumbent LECs to realize scale economies.[112]

The incumbent LECs also benefit from other economies of scale and scope. As parties have noted in the record:

> Their larger base of customers enables them to lower their fiber deployment costs by deploying new fiber facilities to a large number of locations in a single deployment and to obtain volume discounts on equipment needed to upgrade service arrangements. In addition, AT&T and Verizon are two of the largest long distance, broadband and mobile wireless service providers in the country. To the extent that these businesses share joint and common costs with special access, as is the case for example with interoffice transport facilities, the resulting scope economies again give the incumbents[’] lower average costs than their competitors.[113]

Collectively, these barriers serve to refute any claim that the prospect of potential entry into the special access marketplace effectively would constrain the incumbent LECs’ unjust and unreasonable behavior.

C. The Data Do Not Show that the Highly Concentrated Marketplace for Even Very High-Capacity Services Is Effectively Competitive

Drs. Besen and Mitchell note that the share numbers for the incumbent LECs for very high-capacity services are lower than their extraordinarily high shares of lower-capacity

---

[112] Farrell Decl. ¶ 3 (“Special access services are characterized by economies of scale and sunk costs, as well as substantial incumbent first-mover advantages such as rights-of-way and building access.”); Comments of Fibertech Networks, LLC at 19, WT Docket No. 11-65 (filed May 31, 2011) (“As a result of their ubiquitous networks – a legacy of their previously state-sanctioned monopolies, AT&T and other ILECs gain market power from ubiquity that is unavailable to competitors.”).

[113] Joint CLEC Comments at 69-70.

offerings.[114] However, those shares must be viewed in light of other relevant factors that substantially dilute the competitive significance of those data points.[115]

As an initial matter, the share numbers for high-speed services do not change the fact, as the FCC-collected data show, that the incumbent LECs are the *only* facilities-based suppliers with special access customers at any capacity level in the vast majority of locations throughout the country.[116] Moreover, when an incumbent LEC is not the sole high-capacity service provider in the census block or location, there generally is no more than *one* competitor available to serve a potential customer. As explained,[117] a duopoly simply does not represent effective competition.

It also is important to recognize the relative size of the marketplace for higher-capacity connections services today. Those circuits make up a small fraction of the total special access demand: offerings with capacities that exceed 200 Mbps represent fewer than 7 percent of all circuits.[118]

Further, neither the relative size of this marketplace nor the incumbent LECs' shares should be particularly surprising. As parties previously have stated in the record, incumbent LECs have been "reluctant" to offer higher-capacity service aggressively, because doing so would "cannibalize" their legacy, lower-speed offerings.[119] When the incumbent LECs ultimately decide to accelerate their deployment of the highest-capacity services, they will be

---

[114] Besen/Mitchell Decl. ¶¶ 40 (Table 5), 41.

[115] *See, e.g.*, *id.* ¶¶ 41, 48.

[116] *Id.* ¶¶ 25 (Table 1), 26.

[117] *See supra* at V.A.

[118] Zarakas/Gately Decl. ¶ 18.

[119] Comments of tw telecom inc. at 23, WC Docket No. 05-25 (filed Jan. 19, 2010).

able to exploit their market power over legacy special access services to capture a much larger share of the higher-capacity services.[120] As a result, there is no reason to expect that the legacy providers would lack the ability to exercise market power in the provision of such services.

Specifically, history has shown that, as new products achieve commercial success, the incumbent LECs are able to grow quickly by exploiting their nearly ubiquitous networks and extensive financial resources.[121] For example, it is much easier to convert existing facilities from lower-capacity to higher-capacity than it is to deploy new facilities "from scratch." The incumbent LECs also can leverage their exorbitant revenues from lower-capacity services to temporarily subsidize their higher-capacity services, which would make it even more difficult for alternative providers to compete effectively and operate sustainably in the market. In addition, the incumbent LECs clearly can (and do) use the "lock-up" and other unreasonable terms and conditions in existing service agreements to make it uneconomical for customers to purchase higher-capacity services, especially Ethernet services, from an alternate provider.[122]

***

The Commission's traditional market power analysis inquiry "typically involves the consideration of providers' market shares, supply and demand elasticity, and carriers' cost

---

[120] *See* COMPTEL Comments at 7 (explaining that "a firm with market power [over TDM services] can preserve its market power over a newer service that relies to a great extent on the same existing facilities from which it derives its market power over a legacy [TDM] service"); Susan M. Gately and Helen E. Golding, *The Benefits of a Competitive Business Broadband Market*, at 11, S.M. Gately Consulting LLC (Apr. 2013), http://thebroadbandcoalition.com/storage/benefits-of-broadband-competition.pdf ("Nothing about the change in transmission technology (from TDM to packetized) fundamentally alters the economic barriers and market conditions that relate to last-mile facilities.") ("SMGC Report").

[121] Sprint Reply Comments at 32-33.

[122] *See infra* at section VII.

structures, size, and access to resources."[123] As explained above, application of this analysis to the special access marketplace leaves no doubt that the incumbent LECs possess market power.

- The special access marketplace is highly concentrated, and the incumbent LECs hold excessively high market shares.
- Low supply and demand elasticities prevent natural marketplace forces from functioning effectively.
    - Most often, there are *no* competing facilities-based suppliers of special access services in a location or census block.
    - Effective facilities-based competition exists in only very limited areas.
    - Potential competition is insufficient to constrain the incumbent LECs' behavior, primarily due to the incredibly high barriers to entry that new entrants face.
- The incumbent LECs continue to enjoy significant entrenched advantages due to their historic monopolies.

VI. ADDITIONAL EVIDENCE BOLSTERS THE FINDING OF CONTINUED INCUMBENT LEC MARKET POWER

AT&T correctly explained in the petition that initiated the present proceeding nearly fifteen years ago that "large ILECs . . . retain pervasive market power in the provision of [special access] services" and "are abusing that market power with patently unjust and unreasonable rates."[124] Unfortunately, substantial other analyses and evidence presented over the intervening years confirm that this statement is still true and confirm the results of the data analysis described in the previous sections: incumbent LECs continue to possess and exercise overwhelming market power over special access services.

---

[123] *Special Access for Price Cap Local Exchange Carriers: AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16,318, ¶ 60 (2012).

[124] AT&T Corp. Petition for Rulemaking at 1, RM-10593 (Oct. 15, 2002).

For example, both the National Regulatory Research Institute ("NRRI") and Government Accountability Office ("GAO") have found that the market for special access services is concentrated and dominated by the incumbent LECs. In particular, the NRRI examined both market share and market concentration and concluded that "ILECs maintain strongly dominant market shares for DS-1 channel terminations" and "dominant market shares for DS-1 transport," DS-3 channel terminations, and DS-3 transport.[125] The NRRI further found that "all four special access markets are 'highly concentrated' under the standards contained in the [DOJ's] Merger Guidelines."[126] Based on these findings, the NRRI concluded that "ILECs still have strong market power in most geographic areas."[127]

Similarly, the GAO found that "facilities-based competition for dedicated access services to end users at the building level (*i.e.*, analogous to channel terminations to end users) does not appear to be extensive."[128] This is likely due, at least in part, to barriers to entry and restrictive terms and conditions in the incumbent LECs' contracts. The GAO specifically noted that the "apparent limited competition at the building level could be caused by a variety of factors, including the high sunk costs—that is, costs that once incurred cannot be readily recovered—of constructing local networks, the cost of local government regulations, and limited access to buildings."[129] The GAO also noted that "unless a competitor can meet the customer's entire

---

[125] NRRI Report at 45-46.

[126] *Id.*

[127] *Id.* at iii.

[128] GAO Report at 19, 30; *see also id*. at 13 ("Limited competitive build out in these MSAs could be caused by a variety of entry barriers, including zoning restrictions, or difficulties in obtaining access to buildings from building owners that discourage competitors from extending their networks.").

[129] *Id.* at 26.

demand, the customer has an incentive to stay with the incumbent and to purchase additional circuits from the incumbent, rather than switch to a competitor or purchase a portion of their demand from a competitor—even if the competitor is less expensive."[130] With respect to pricing, the GAO notably concluded that "prices and average revenues are higher, on average, in phase II MSAs—where competition is theoretically more vigorous—than they are in phase I MSAs or in areas where prices are still constrained by the price cap."[131]

More recent analyses also demonstrate that the incumbent LECs continue to exercise market power. For example, Windstream recently submitted a white paper prepared by CostQuest that demonstrates that the incumbent LECs continue to enjoy significant advantages in competing for business service customers that directly result from the "ILEC first mover advantage rooted in the monopoly era."[132] Among other findings, the CostQuest study disclosed that: (1) the "revenue required to support CLEC overbuilding of . . . last-mile fiber facilities—in the face of the lower market shares that CLECs can expect—remains prohibitively high for most business locations"; (2) "current wholesale Ethernet prices may exceed retail Ethernet prices in some locations"; and (3) a "CLEC's fiber build project costs . . . often are greater than if the ILEC deployed fiber in the same area."[133] Because these benefits are not restricted to legacy technologies, the incumbent LECs also "hold a significant cost advantage even for 'new' fiber builds," thereby further "expos[ing] the flaw in the ILECs' argument that CLECs are on equal

---

[130] *Id.* at 30.

[131] *Id*. at 13.

[132] Letter from Jennie B. Chandra, Vice President - Public Policy and Strategy, Windstream Services, LLC, to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket No. 05-25 (filed June 8, 2015) ("Windstream Submission").

[133] *Id*. at 2, 6.

competitive footing when it comes to Ethernet."[134] Moreover, Windstream correctly noted that the incumbent LECs "cement their advantage [by using] lock-up agreements to leverage locational monopolies across entire markets."[135]

Importantly, Ofcom, the communications industry regulator in the United Kingdom, also has undertaken regular examinations of market power in the provision of leased line services, which are roughly equivalent to U.S. special access services, and found that even at lower levels of dominance than found in the United States, regulatory intervention was necessary.[136] In Ofcom's experience, "the most important factor that determines the emergence of leased lines access competition is the amount and density of rival infrastructure."[137] Ofcom generally has concluded that an incumbent possesses market power unless there are both (1) upwards of two rivals to the incumbent in the relevant market, and (2) a high density of business sites (higher than 50-70 percent) in a given geographic area that are within reach of rivals' infrastructure.[138] For example, Ofcom found that the incumbent had market power when it possessed 74 percent of the share by volume, a ubiquitous network, and there were high barriers to entry and expansion.[139]

---

134 *Id.* at 6 (emphasis excluded).

135 *Id.* at 7.

136 *See* Ofcom, Business Connectivity Market Review – Final Statement (Mar. 28, 2013), http://stakeholders.ofcom.org.uk/consultations/business-connectivity-mr/final-statement/ ("Ofcom 2013"); Ofcom, Business Connectivity Market Review (May 15, 2013), http://stakeholders.ofcom.org.uk/consultations/bcmr-2015/ ("Ofcom 2015").

137 Letter from Sheba Chacko, Head of Americas Regulation and Global Telecoms Policy, BT Americas Inc. to Marlene H. Dortch, Secretary, FCC, at 1, WC Docket No. 05-25 (filed June 3, 2015) ("BT Filing"); *see also* Ofcom 2015 ¶ 4 n.84 (noting that "rival infrastructure is the main determinant of competition").

138 BT Filing at 1.

139 Ofcom 2013 ¶¶ 1, 29.

These findings, which are notable in their consistency, demonstrate precisely what the data collected by the Commission and the record in this proceeding disclose: there is insufficient competition in the special access marketplace due to the incumbent LECs' ongoing ability to leverage their entrenched advantages and market power in unjust, unreasonable, and discriminatory ways. Collectively, these findings also serve to bolster the conclusions from analyzing the data collection and suggest that special access services will remain non-competitive, unless and until the Commission intervenes.

VII. THE TERMS AND CONDITIONS IMPOSED BY THE INCUMBENT LECS FURTHER BUTTRESS THEIR DOMINANCE IN THE SPECIAL ACCESS MARKETPLACE

As purchasers and competitive providers of special access services long have argued—and the data collection responses now confirm—incumbent LECs routinely use anticompetitive terms and conditions to preserve and expand their dominance over special access services. These terms and conditions convert incumbent LEC special access plans into competition-killing loyalty mandates: they require customers to maintain their prior purchase levels and commit new demand to the incumbent LEC, drastically reducing the possibility of competitive entry for everyday special access business. Using loyalty mandates, the incumbent LECs have already crippled wireless and wireline broadband competition supported by TDM special access services, and are now using similar unjust and unreasonable tactics to interfere with the country's evolution to IP-based networks.

The data collection responses outline the mechanisms incumbent LECs use to undermine competition. By requiring customers to accept, and remain subject to, loyalty commitments, the incumbent LECs undermine the ability of new entrants to compete in the special access marketplace, and allow incumbent LECs to leverage their historic dominance over TDM-based

special access services to further dominate the market for IP-based special access services. The data collection responses also discredit the tired claim that incumbent LEC loyalty provisions are "simple term plan[s]"[140] or "volume commitments"[141] that promote competition. Given the immense harm to competition and lack of countervailing pro-competitive benefits, the Commission must determine that incumbent LEC loyalty provisions are unjust and unreasonable.

A. The Mechanics of Incumbent LEC Loyalty Mandates

Unconstrained by adequate competition, incumbent LECs use their ability to set prices to force customers into loyalty plans using at least two techniques. First, incumbent LECs set "rack rates" for special access plans that are unmoored from commercial reality—a business-killing "MSRP" that few customers do or could ever pay. The incumbent LECs then condition relief from their exorbitant rack rates on a buyer's acceptance of a loyalty commitment. Second, incumbent LECs charge excessive "move" penalties or per-circuit early termination fees that impose huge costs when customers respond to normal retail churn by switching circuits from one location to another, even if the customer purchases from the incumbent LEC at the new location. Incumbent LECs will then "waive" these penalties to offer "circuit portability," but only if the customer makes a loyalty commitment that undermines future competition.

The loyalty provisions that customers are forced to accept require them to commit for an extended term to purchasing as much as 95 percent of their existing purchase levels from the incumbent LEC. Once a customer becomes subject to a loyalty commitment, the incumbent

---

[140] Letter from Keith M. Krom, General Attorney and Associate General Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, at 3, WC Docket No. 05-25 (filed Oct. 13, 2015); Letter from Robert C. Barber, General Attorney AT&T, to Marlene H. Dortch, Secretary, FCC, at 3, WC Docket No. 05-25 (filed Oct. 10, 2014).

[141] Reply Comments of CenturyLink, Inc. at 27, WC Docket No. 05-25 (filed Mar. 12, 2013) ("CenturyLink Reply Comments"); Reply Comments of Verizon and Verizon Wireless at 24, WC Docket No. 05-25 (filed Mar. 12, 2013) ("Verizon Reply Comments").

LECs deploy a variety of tools to ensure that the customer remains locked-in. For example, if a customer misses its commitment during a review period, the incumbent LEC will enforce a punitive "shortfall" penalty, which can far exceed the amount by which the customer missed its loyalty commitment. If a customer wants to reduce its commitment, it may have to pay an enormous "buydown" penalty, which can similarly cost the customer more than it would pay by maintaining the loyalty commitment. Incumbent LECs also impose "overage" penalties that punish customers for exceeding their loyalty commitment, but will waive these penalties if the customer increases its purchase commitment level going forward. By forcing the customer to keep incremental demand with the incumbent LEC, this construct ensures that growing businesses cannot amass enough new demand to spur competitive entry.

1. Using Their Market Power, Incumbent LECs Impose Unreasonable "Rack Rates" and Restrictions on Circuit Portability

As described in detail above, the data collection confirms what competitive providers have experienced in the marketplace for years: high prices and onerous terms for special access service exist against a backdrop of entrenched and far-flung incumbent LEC market power in the vast majority of the country.[142] Without enough competition to discipline their behavior, incumbent LECs with pricing flexibility have wide latitude to set the rates and terms of service. The data collection demonstrates that, through pricing plan schemes and configuration gimmicks, incumbent LECs use this pricing power to force consumers into loyalty mandates while maintaining the appearance of a voluntary commitment.

[142] *See, e.g.*, Sprint Reply Comments at 24; Comments of Level 3 Communications, LLC at 7-8, WC Docket No. 05-25 (filed Feb. 11, 2013) ("Level 3 Comments").

Specifically, for month-to-month service without a loyalty mandate, incumbent LECs impose unreasonably high "rack rates."[143] Responses to the data collection and published tariffs show that these rack rates wildly exceed the price that a competitive market would produce. In fact, not only are reported rack rates greater than what customers would pay in a competitive market, but they are also not economically viable for many purchasers. For example, tw telecom reports that it is simply "not possible" to provide retail business services "by serving off-net locations via *ILEC* special access services purchased at undiscounted" rack rates.[144] Similarly, ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****[145] Tellingly, these rack rates often exceed the profit-maximizing rate that a rational *monopolist* would charge, proving conclusively that they are not intended to be a serious offering, but rather a tool to force incumbent LEC customers to accept loyalty commitments.[146] Given the manifest unreasonableness of rack rates, it is hardly surprising that only a small percentage of purchasers pay them.[147] Instead, most special access customers proceed with the only option genuinely available to them: a plan with pricing that is

---

[143] *See* Sprint Comments at 13, 33, 35, 39; ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****

[144] tw telecom Response to Request II.F.8 at 1.

[145] ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****

[146] *See Designation Order* ¶ 19 n.54 (noting that, because purchasers do not fully internalize the cost to competition that results from their agreement to a loyalty discount, sellers can "list prices above monopoly levels and offer[] discounts so the monopoly price is paid").

[147] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

somewhat lower than the rack rate (but still supra-competitive), coupled with loyalty provisions that perpetuate incumbent LEC dominance.

Incumbent LECs' terms and conditions also include unworkable circuit portability restrictions designed to coerce customers into accepting restrictive loyalty mandates. Many customers, including Sprint, purchase thousands of circuits at thousands of locations under one incumbent LEC special access plan in order to provide service to a diverse set of end users in a region. During any given period of time, these end users add service at some locations and terminate service at others. In response to these changes in the service requirements of their retail customers, large wholesale special access purchasers must routinely deactivate some circuits and activate new ones, even as the total number of wholesale circuits purchased under the plan for the affected region stays at the same level. Indeed, competitive wireline broadband providers such as tw telecom and Level 3 report an inherent need to switch circuits as customers move locations, or as the provider replaces "retail customers" that "choose[] not to renew . . . service."[148]

Some incumbent LECs charge an enormous termination penalty for deactivating individual circuits mid-contract—even if the customer activates another circuit and maintains the same total spend with the incumbent LEC, and even if the deactivated circuit has been in place for several full contract terms already—or a "move" penalty for switching circuits. These switching penalties create the specter of aggregate liabilities that would quickly erode profit margins if applied across a wide range of purchases.[149] In some regions, incumbent LECs exploit the fundamental commercial need to switch circuits by "waiving" switching penalties

---

[148] Level 3 Response to Request II.F.8 at 4; *see also* tw telecom Response to Request II.F.8 at 3.

[149] *See, e.g.*, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

under so-called "circuit portability" provisions, but will only offer "circuit portability" under a plan that also includes a loyalty commitment.[150] Thus, like rack rates, these circuit portability provisions contrive a false sense of choice as they effectively force customers into a loyalty plan.

2. The FCC Data Confirm that Anticompetitive Shortfall, Buydown, and Overage Penalties Are Widely Used by Incumbent LECs to Entrench Their Marketplace Dominance

Once the incumbent LEC coerces its customers into a loyalty plan, it enforces compliance through provisions that deter migration to competitive providers, even if they charge a substantially lower price. In addition to excessive contract termination charges, incumbent LECs impose steep "shortfall" penalties, which require customers to pay a fee if the purchased circuit volume falls a certain percentage below the committed level.[151] Along the same lines, incumbent LECs impose "buydown" penalties, which provide customers the "option" to reduce their commitment levels only if they pay a cost-prohibitive penalty.[152]

Incumbent LECs insist that these penalties are merely reasonably priced options designed to provide customers with the flexibility of switching to another provider. But the penalty amounts reported by market participants contradict that specious claim. In many cases, purchasers report shortfall penalties "equal to the difference" between actual and committed

---

[150] *See* ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****; tw telecom Response to Request II.F.8 at 3; EarthLink Response to Request II.F.8 at 1; Joint CLEC Comments at 24; Level 3 Comments at 3; XO Comments at 12-13.

[151] *See, e.g.*, Level 3 Response to Request II.F.8 at 2-3; tw telecom Response to Request II.F.8 at 2; ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[152] ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****

spend[153]—even though the incumbent LEC no longer provides service—meaning that (1) the penalty has no bearing to the incumbent LEC's costs of service,[154] and (2) the switch to a cheaper alternative provider will almost never be economic, as the purchaser receives no savings from the incumbent LEC even for circuits no longer in use.[155] In extreme cases, purchasers report shortfall penalty amounts that are even further disconnected from costs, and that would make switching to a competitive provider even less economically rational. tw telecom, for example, purchases DS1s under an AT&T tariff which imposes a monthly shortfall penalty equal to "approximately *eight times* the average monthly discounted charge for" each termination.[156]

Incumbent LECs also ensure that their customers remain loyal through the use of "overage" penalties. If a customer exceeds its commitment level by a certain amount, incumbent LECs will penalize the customer with massive fees—unless, of course, the purchaser agrees to ratchet up its commitment level to reflect the increased purchase amounts, thereby deepening its loyalty commitment. To avoid overage penalties, customers report that they must increase commitment levels over time, which further decreases their capacity to switch circuits to a competitive carrier without triggering shortfall or buydown penalties.[157] Moreover, by allowing

---

[153] Level 3 Response to Request II.F.8 at 2; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[154] Joint CLEC Comments at 23 n.44, 44-45.

[155] Level 3 Response to Request II.F.8 at 3.

[156] tw telecom Response to Request II.F.8 at 4 (emphasis added).

[157] *See* tw telecom Response to Request II.F.8 at 2; Level 3 Response to Request II.F.8 at 3; ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

the incumbent LEC to "lock up increasing amounts of demand in [its] territory,"[158] these penalties prevent customers with growing special access needs from accumulating enough demand to induce entry by a competitor, thus "exacerbating and prolonging [the] harmful effects" of incumbent LEC loyalty mandates.[159]

B. Terms and Conditions Put Purchasers in an Impossible Situation that Strangles Competition in the Crib

In the limited situations where an alternative vendor offers special access services, incumbent LEC loyalty mandates inflict immediate damage on customers who cannot take advantage of superior offerings from new entrants that are more efficient or otherwise willing to provide service at a more competitive price or on more favorable terms and conditions.[160] But the enduring harm to competition is more severe. As the data collection makes clear, a facilities-based special access provider, like any new supplier of any other product or service, needs sufficient demand to overbuild last-mile facilities.[161] Because of incumbent LEC loyalty commitments, however, most demand for special access service remains locked up with an incumbent, leaving potential competitors with two options: to pour massive investments into incumbent LEC overbuilds to fight for the tiny share of the market that remains unburdened by

---

158 Level 3 Response to Request II.F.8 at 3.

159 EarthLink Response to Request II.F.8 at 2.

160 *See, e.g.*, Letter from Thomas Jones and Matthew Jones, Counsel, Level 3 Communications, LLC, to Marlene H. Dortch, Secretary, FCC, at 4-5, WC Docket No. 05-25 (filed Sept. 23, 2015).

161 *See, e.g.*, ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

an incumbent LEC commitment, or to offer service at prices low enough to overcome the penalties that buyers must pay to switch away from incumbent LECs.

Neither option is economic—even for sophisticated, well-capitalized entrants that are eager to invest. With respect to prior purchase commitments, in the vast majority of geographic areas, most purchasers have been buying from the incumbent LEC for years, and service from the incumbent LEC therefore accounts for a high percentage of their total demand for special access. Thus, to satisfy incumbent LEC volume requirements, these customers must continue to purchase most of their total demand through the incumbent LEC.[162] The same holds true for term commitments, as the long duration of the typical term commitment reduces the amount of unlocked demand for special access services available to a new entrant at any given point of time. As a result, respondents report little excess, unlocked demand available to spur competitive entry in the special access marketplace.[163]

While purchasers subject to loyalty commitments theoretically could free up demand for alternative vendors by paying termination fees or shortfall penalties, "buying down" reductions in their commitment levels, or paying any applicable circuit migration charges, the magnitude of the reported penalties makes it "virtually impossible" for alternative vendors "to compete for the

---

[162] *See* ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****

[163] *See, e.g.*, tw telecom Response to Request II.F.8 at 4 (the "combined effect" of incumbent LEC mandates is "to lock tw telecom into purchasing virtually all of the *DS1s* it needs" from the incumbent LEC); ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

demand that is subject to these commitments."[164] This is because to gain the business of an incumbent LEC customer, a competitive provider would have to offer service at rates low enough to overcome the immense costs associated with the switch. As Level 3 reports, these rates make entry uneconomic in all but the most extreme business cases.[165] Indeed, as described in more detail below, Sprint had to issue a network-wide re-bid for wireless backhaul to attract rates low enough to overcome these penalties at all, and even then Sprint could only obtain these rates in a select number of locations.

Just as shortfall and buydown penalties lock up *existing* demand with the incumbent LEC, overage penalties earmark *future* growth in special access services for the incumbent LEC. Because of overage penalties, a customer with increasing special access needs cannot simply purchase additional circuits from the incumbent LEC on a month-to-month basis as it waits for competitive options to develop. It must also pay enormous penalties if it exceeds the overage thresholds specified in the incumbent LEC's special access plan. To avoid these inflated charges, purchasers must commit their incremental demand to the incumbent LEC, as described above. This substantially reduces the possibility that customers will eventually amass enough uncommitted demand to spur competitive entry.[166]

Because so much demand for special access services remains committed to an incumbent LEC, everyday marketplace conditions rarely support the entry needed to discipline incumbent LEC rates and terms and conditions. In response to these conditions, Sprint took an unprecedented and extreme action to try to elicit special access competitive entry through its

---

[164] Level 3 Response to Request II.F.8 at 3.

[165] *See id.*

[166] *See id*; tw telecom Response to Request II.F.8 at 4; EarthLink Response to Request II.F.8 at 1.

Network Vision program. As part of Network Vision, Sprint committed itself to a network-wide rebid of nearly its entire wireless backhaul system, leveraging the size, resources, and wireless footprint that separates Sprint from many other buyers of incumbent LEC special access to achieve unparalleled scale as a special access buyer.

But even this extraordinary effort proved incapable of introducing effective competition. While Sprint was able to attract a few alternative vendors in some locations, ultimately the majority of its backhaul circuits and expense remain with the incumbent LEC, despite designing a huge, new program to avoid that result. For many cell sites, Sprint simply had to continue its existing service—incumbent LEC-supplied TDM backhaul in most cases—because Sprint did not receive any Ethernet bids at all. Moreover, because of the penalties imposed under incumbent LEC loyalty mandates, Sprint faced enormous costs to migrate even this small percentage of backhaul to the new alternative vendors. And, dishearteningly, the incumbent LEC did not always adjust its prices even in areas where Sprint did receive a bid from a competing supplier. Incumbent LEC dominance is so strong that it could simply ignore the competitor, because the limited locations up for grabs were too small to cause the incumbent LEC concern. Unsurprisingly, these dampened competitive dynamics produced supra-competitive pricing even in areas where a competitor emerged—areas that include Sprint's most expensive market.

The underwhelming impact of Sprint's Network Vision effort provides further proof of the extent to which incumbent LEC terms and conditions have foreclosed competitive entry at the scope and scale necessary to produce just and reasonable rates. Not every company can attempt to tear down the walls to competition erected by incumbent LEC terms and conditions in this manner—nor can Sprint in its day-to-day wireless operations. Sprint's wireline business,

like that of other competitive wireline broadband providers, is even less capable of generating the massive scale of Network Vision, because wireline providers cannot predict which specific commercial buildings their enterprise retail customers will occupy and cannot solicit bids on those locations ahead of time. Even if a competitor could build out to a new location, Sprint would have to provide services using ILEC special access services as new facilities are constructed and installed over a significant period of time. This means paying enormous rack rates, and in some cases, high non-recurring charges, that quickly erode the benefits of switching to a competitive provider, and most likely dissuade competitive entry.

Moreover, even if similar efforts could become a sustainable and regular feature of the special access marketplace, Sprint's experience shows that the demand generated by such efforts still would not yield enough alternatives to adequately check the incumbent LECs' anticompetitive conduct. Genuine competition simply requires more demand than will ever become available if the incumbent LECs' exclusionary and anticompetitive terms and conditions are allowed to remain in place.

C. Incumbent LECs Use Unjust and Unreasonable Terms and Conditions to Expand and Maintain Market Power in Ethernet Services

Through a variety of means, incumbent LECs are leveraging their dominance over TDM special access to deepen their control of the marketplace for Ethernet services.

First, the data collection demonstrates that incumbent LECs are leveraging the unreasonable terms and conditions contained in their TDM plans to unjustly advantage their Ethernet service plans over those of competitors. Respondents to the data collection report that AT&T and Verizon ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted]

[redacted] ***** END HIGHLY CONFIDENTIAL *****[167] In another example, Verizon ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[168] Thus, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[169]

Incumbent LECs achieve the same result through so-called "technology migration" provisions in tariffs for TDM special access services. These provisions allow customers seeking to convert a TDM line to Ethernet to decrease their DS1 or DS3 commitment levels so long as the customer commits its Ethernet service to the incumbent LEC.[170] This gambit works because if a purchaser wants to switch its circuits from TDM to Ethernet, it must contend with incumbent

---

[167] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[168] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[169] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[170] tw telecom Response to Request II.F.8 at 17 ("Some plans do contain limited 'technology migration' provisions, which allow tw telecom to either (1) reduce its *Volume Commitment* level when it upgrades circuits from *DS1* or *DS3* to Ethernet or (2) count circuits upgraded from *DS1* or *DS3* to Ethernet toward its *Volume Commitment*.").

LEC shortfall and buydown penalties that apply when it decreases its TDM purchases.[171] By ensuring that the customer purchases Ethernet from the incumbent LEC rather than a competitor, this strategy effectively uses the incumbent LECs' historical dominance of the TDM marketplace to deepen their control over the Ethernet marketplace.

Second, responses to the data collection demonstrate that where relief from incumbent LEC penalties is unavailable, loyalty plans for TDM special access services reduce demand for Ethernet special access services, thus decelerating the country's advancement to more efficient IP-based networks at the very moment that the FCC is working to support that transition. EarthLink reports that ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****[172] Similarly, XO Communications reports that ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[173] Level 3 and tw telecom ***** BEGIN**

[171] *See, e.g.*, Comments of Windstream Corporation at 8-9, GN Docket No. 13-5 (filed Mar. 31, 2014); Comments of Sprint Corporation at 4 n.7, GN Docket No. 13-5 (filed Feb. 5, 2015); Letter from Thomas Cohen, Counsel, XO Communications, LLC to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed June 5, 2015); Letter from Angie Kronenberg, Chief Advocate and General Counsel, COMPTEL to Marlene H. Dortch, Secretary, FCC, at 8 n.31, GN Docket No. 13-5 (filed Apr. 2, 2014).

[172] ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****

[173] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

HIGHLY CONFIDENTIAL *** [redacted] ***** END HIGHLY CONFIDENTIAL *****[174] The intent and combined effect of incumbent LEC loyalty commitments, technology migration provisions, and overlay agreements appears to be to carefully meter the IP transition, even at the cost of delaying it to ensure that the incumbents can appropriate any new Ethernet business, limit competition, and maintain their market power over dedicated broadband services.

Finally, incumbent LECs have already begun to impose the same types of anticompetitive terms and conditions in Ethernet special access contracts that for years have been included in TDM agreements. Many of Sprint's incumbent LEC Ethernet contracts impose enormous early termination penalties that bear no relationship to underlying costs, while also prohibiting Sprint from switching services to a competitor. Indeed, under one contract, Sprint can disconnect a given Ethernet circuit with the incumbent LEC without a penalty only if Sprint agrees to either self-provision or use existing TDM-based services from the incumbent—in other words, as long as Sprint explicitly commits itself not to switch to an alternative Ethernet provider.

D. Incumbent LEC Loyalty Provisions Are Unjust and Unreasonable

The Commission has determined that exclusive agreements which "harm competition and consumers" are unjust and unreasonable, unless they confer enough "countervailing benefits" to outweigh their competitive harm.[175] As explained above, incumbent LEC loyalty commitments

---

[174] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[175] *See, e.g.*, *Promotion of Competitive Networks in Local Telecommunications Markets Wireless Communications Association International, Inc. Petition for Rulemaking to Amend*

have locked up so much demand for wholesale special access services that it is extremely difficult for even large special access purchasers to generate the scale needed to induce market-disciplining competition. Incumbent LEC loyalty commitments are also undermining competition for Ethernet special access services, delaying the transition to IP networks and the creation and adoption of the advanced broadband applications those networks support, and threatening competition in downstream markets for wireless and wireline broadband services that rely on wholesale special access as a critical input.

Against this backdrop of competitive harm, the incumbent LECs have offered no legitimate pro-competitive justification for the loyalty commitments they seek to continue to impose. Contrary to the incumbent LECs' claims, their loyalty mandates are not efficiency-driven volume commitments enforced by reasonable, cost-justified penalties, are not entered into voluntarily, and do not meaningfully resemble the terms offered by competitive special access providers. The Commission should therefore conclude that incumbent LEC loyalty plans are unjust and unreasonable, and take steps to allow purchasers subject to these plans to choose providers on the basis of price, service, and quality of service, transition to more advanced

---

Section 1.4000 of the Commission's Rules to Preempt Restrictions on Subscriber Premises Reception or Transmission Antennas Designed to Provide Fixed Wireless Services et al., First Report and Order and Further Notice of Proposed Rulemaking in WT Docket No. 99-217, Fifth Report and Order and Memorandum Opinion and Order in CC Docket No. 96-98, Fourth Report and Order and Memorandum Opinion and Order in CC Docket No. 88-57, 15 FCC Rcd. 22,983, ¶ 35 (2000) (finding that "a carrier's agreement" to an "exclusive contract[] for telecommunications service in commercial settings" is "an unreasonable practice," where the contract "impede[s] the pro-competitive purposes of the 1996 Act and appear[s] to confer no substantial countervailing public benefits") ("*Competitive Networks Order*"); *Promotion of Competitive Networks in Local Telecommunications Markets*, Report and Order, 23 FCC Rcd. 5385, ¶ 5 (2008) (prohibiting enforcement of exclusive agreements to provide telecommunications services to residential customers in multiple tenant environments) ("*MDU Exclusivity Order*").

networks, and ignite more vibrant competition for retail wireless and wireline broadband services.

1. Incumbent LEC Loyalty Commitments Are Not Pro-Competitive "Volume Commitments"

The incumbent LECs argue that their loyalty mandates are "economically justified . . . volume commitments," because they provide predictable revenue[176] and "scope or economies of scale."[177] This is incorrect. Though facially related to volumes and revenues, a review of the loyalty mandates that incumbent LECs attempt to portray as volume commitments demonstrates that these terms are not discounts tied to increased volumes at all. To the contrary, they are carefully crafted volume-insensitive mechanisms that foreclose entry by locking up customers and increasing the cost of competitive entry.

Under a true volume discount, the supplier offers a lower price for the purchase of a higher quantity of a product, reflecting the lower cost per unit associated with providing higher quantities. These commitments generally offer lower unit prices for high-volume purchases,[178] because they allow providers to ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[179] Loyalty mandates, on the other hand, do not offer discounts for higher volumes, but instead work to lock customers into their current rate of spend,

---

[176] CenturyLink Reply Comments at 27; Verizon Reply Comments at 19.

[177] Reply Comments of AT&T at 37, WC Docket No. 05-25 (filed Mar. 12, 2013) (internal quotations omitted) ("AT&T Reply Comments").

[178] *See* ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

[179] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

whatever the starting volume may be. This is the precise function of the incumbent LEC loyalty commitments reported in response to the data collection.

Rather than relating pricing to the absolute number of circuits purchased by the customer, incumbent LEC commitments tie pricing to the customer's agreement so that they do not substantially reduce its previous spend level going forward. Prices are therefore not linked to lower per-unit costs but instead to loyalty. As Sprint has mentioned previously, "[i]t costs no more to provide 10 DS1s to a small but loyal customer than to provide 10 DS1s to a large but 'disloyal' customer that shifts the remainder of its lines to a competitor."[180] Furthermore, incumbent LEC prices cannot be explained as reflecting only differences in economies of scale. Incumbent LEC networks already reach the vast majority of locations in their footprint, and unlike competitors, adding customers typically does not require incumbent LECs to build out new facilities. Nevertheless, under the incumbent LECs' loyalty provisions, the disloyal customer would face a stiff penalty for migration. Along the same lines, under these claimed volume discounts, a customer that purchases 1,000 lines but does not meet its loyalty commitment would pay more than a customer that purchases 100 lines but does meet its loyalty commitment, resulting in a volume *penalty* that the incumbent LEC's concocted competitive justification cannot explain.[181]

The incumbent LECs also claim that loyalty provisions are justified because they promote revenue predictability and certainty. These claims are also incorrect. First, while loyalty mandates unquestionably protect incumbent LECs' cash flows, it does not follow that they are just and reasonable. Less problematic terms, such as *true* volume commitments, would

---

[180] Sprint Comments at 26.

[181] *See* ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

also provide incumbent LECs with predictability without foreclosing the possibility of entry by lower cost or more efficient competitive providers. Even terms that require customers to commit to a smaller, more reasonable percentage of their current demand from an incumbent LEC would leave customers with some flexibility to use multiple providers while also promoting revenue predictability.[182] Second, while respondents to the data collection agree that capacity commitments from customers can encourage deployment of new facilities,[183] many of the facilities used to supply TDM-based special access services are now fully depreciated. Commitments that absorb the vast majority of a customer's demand well past the point of repayment do not have any plausible pro-competitive rationale. Finally, predictability and certainty are never guaranteed in a truly competitive market. In a competitive market, providers must rely on price, quality of service, and innovative products to fully secure future revenue, and not one-sided contractual terms that give the seller a stronghold on purchasers of the service.

High incumbent LEC overage fees, waived upon rolling excess purchases into a higher volume commitment, add to the unreasonableness of incumbent LEC loyalty mandates because they ensure that customers commit growth in demand to the incumbent LEC, thereby further reducing the chance that sufficient, uncommitted demand will develop and permit competitive entry. Put simply, although incumbent LECs have the opportunity to offer reasonable volume provisions genuinely tailored to the benefits of predictable and certain investment returns, they choose not to. Instead, the incumbent LECs have implemented anticompetitive terms that lock-

---

[182] Stanley M. Besen and Bridger M. Mitchell, *Anticompetitive Provisions of ILEC Special Access Arrangements*, ¶ 47, appended as App. A to Joint CLEC Comments ("Besen/Mitchell Anticompetitive Provisions Paper").

[183] *See generally* Responses to Request II.A.8.

up nearly *all* current and future demand for special access—terms whose injury to competition far outweighs whatever claimed benefit they bring to the incumbent LEC.[184]

2. Incumbent LEC Penalties Are Excessive and Have No Reasonable Economic Basis

Incumbent LECs claim that their early termination, shortfall, buydown, and overage penalties merely recover the cost of deploying special access facilities, and "enforce the bargain struck"[185] when a customer "chooses" a plan with term and volume commitments.

This claim is also incorrect for two principal reasons.

First, the size of the penalties reported in the data collection demonstrates that incumbent LEC termination fees bear no relationship to costs. The primary economic justification of a termination penalty is to allow the supplier to recoup sunk costs associated with providing service to a customer—a recovery that the supplier builds into recurring charges over the life of a contract, and must partially forgo if the customer terminates a contract early.[186] However, in many special access plans, termination penalties far exceed any plausible sunk cost associated with providing service to a particular customer. Indeed, many of these fees exceed the monthly rate under the relevant loyalty plan—by as much as 800 percent under some tariffs.[187] Moreover, from the record, it appears that no incumbent LEC offers customers the option of covering sunk costs on a *non*-recurring basis and proceeding month-to-month, even though an

---

[184] *See* Sprint Comments at 27; Einer Elhauge and Abraham L. Wickelgren, *Robust Exclusion Through Loyalty Discounts*, Harvard Law School, John M. Olin Center for Law, Economics, and Business, Discussion Paper No. 662, at 2-3 (Jan. 2010), http://www.law.harvard.edu/faculty/elhauge/pdf/Elhauge_662.pdf.

[185] Verizon Reply Comments at 25; *see* AT&T Reply Comments at 32.

[186] Besen/Mitchell Anticompetitive Provisions Paper ¶¶ 57-61.

[187] tw telecom Response to Request II.F.8 at 4.

incumbent LEC genuinely concerned with recouping costs would be indifferent between that arrangement and a term plan with a reasonable termination fee.[188] Instead, incumbent LECs merely offer potential purchasers the "option" of going month-to-month at cost-prohibitive, supra-monopolist rack rates or subscribing to a term commitment with an excessive termination penalty.

Second, some of the reported penalties are also much higher than needed to "enforce" the imaginary "bargain" that customers made by committing to terms and volumes. Under several special access plans, the incumbent LEC determines the termination penalty based on the rack rate, and *not* the "bargained for" discount rate that customers actually pay under their contract.[189] As a result, these penalties *exceed* the cost of simply covering all remaining payment obligations under the contract. Incumbent LEC claims that termination penalties require the customer "to give up only a portion of the savings it received as a result of its original commitment" are therefore misleading and beside the point.[190] Not only do the incumbent LECs disregard that these purported "savings" are measured against unreasonable base offerings set by fiat, they also ignore the fact that the reported termination penalties give incumbent LECs *more* than the full benefit of the original "bargain,"[191] transforming at least plausibly efficient "take-or-pay" provisions into facially unjustified "take-or-pay-more" commitments.[192] Similarly, the incumbent LECs have set overage charges that bear no relationship to the amount necessary to

---

[188] *See* Besen/Mitchell Anticompetitive Provisions Paper ¶¶ 57-61.

[189] *See, e.g.*, Level 3 Response to Request II.F.8 at 4-5 n.17; tw telecom Response to Request II.F.8 at 5 n.17.

[190] Verizon Reply Comments at 25.

[191] *Id.*

[192] Sprint Comments at 34; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

prevent customers from committing to an artificially low spend. Instead, the severity of overage penalties ensures that customers commit new special access purchases to their existing loyalty plan rather than engage a competitor, and ramp up incumbent LEC commitment levels when a contract is renewed.

At bottom, reported penalty amounts are far greater than necessary to achieve any efficiency claimed by the incumbent LEC. The only purpose they serve is to lock-up current and future demand in the special access marketplace. Indeed, under some plans, if a customer switches to another provider with two years left on its contract with the incumbent LEC, the penalties would approximate a full year of charges per affected circuit. No competitor could offer service at a price low enough to overcome such severe penalties—which is the *only* plausible explanation of the penalty rates the incumbent LECs have chosen.[193]

3. Similar Terms and Conditions Do Not Appear in Contracts for Special Access Services Provided by Competitive Providers

Contrary to arguments the incumbent LECs have made for years, loyalty commitments in special access service agreements are not a natural response to competition. Rather, loyalty commitments *highlight* the *absence* of competition. Indeed, out of 566 non-incumbent data request respondents—all of whom face competition from, at minimum, an incumbent LEC—*** **BEGIN HIGHLY CONFIDENTIAL ***** [redacted]

[193] *See, e.g.*, Farrell Decl. ¶¶ 5-12.

[redacted] *** END HIGHLY CONFIDENTIAL ***[194]

The reason is simple: non-incumbent providers lack the market power needed to impose unreasonable terms and conditions. As a host of small competitive providers explains, *** BEGIN HIGHLY CONFIDENTIAL *** [redacted] *** END HIGHLY CONFIDENTIAL ***[195] In addition, *** BEGIN HIGHLY CONFIDENTIAL *** [redacted] *** END HIGHLY CONFIDENTIAL ***[196] And, according to Level 3 and tw telecom, "*Competitive Providers* serve only a relatively small number of locations with their own network facilities, generally face competition from multiple facilities-based competitors in every location in which they do offer such service, are unable to impose high undiscounted rates on buyers, and are therefore unable to lock up large volumes of demand."[197]

---

[194] *See* *** BEGIN HIGHLY CONFIDENTIAL *** [redacted] *** END HIGHLY CONFIDENTIAL ***; *** BEGIN CONFIDENTIAL *** [redacted] *** END CONFIDENTIAL ***

[195] *** BEGIN HIGHLY CONFIDENTIAL *** [redacted] *** END HIGHLY CONFIDENTIAL ***

[196] *** BEGIN HIGHLY CONFIDENTIAL *** [redacted] *** END HIGHLY CONFIDENTIAL ***

[197] Level 3 Response to Request II.A.18 at 2; tw telecom Response to Request II.A.18 at 2.

By contrast, some competitive providers—including ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[198]—*do* offer genuine *volume discounts* to their customers. These discounts—which are more easily justified on grounds of efficiency, and comparable to practices in competitive marketplaces[199]—***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****[200]

Loyalty commitments, as discussed above, have no legitimate economic justification, which is why they cannot exist in truly competitive markets. Indeed, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[201] Accordingly, ***** BEGIN**

---

198 *See* ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

199 *See* ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

200 ***** BEGIN CONFIDENTIAL ***** [redacted] ***** END CONFIDENTIAL *****; ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

201 ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

HIGHLY CONFIDENTIAL * [redacted] *** END HIGHLY CONFIDENTIAL ***[202]** Rather, as Level 3 and tw telecom report, incumbent LEC loyalty commitments are "not based on a true commercial negotiation but instead on the ILEC's ability, through its market power, to extract significant concessions from customers that deprive *Competitive Providers* of the ability to compete for large amounts of *Dedicated Services* business."[203]

***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[204] The competitive providers' terms and conditions make it clear that incumbent LEC loyalty commitments are unjust, unreasonable, and unsustainable in truly competitive markets.

The position in which Sprint finds itself as a large purchaser of incumbent LEC special access further reveals the gulf between incumbent LEC terms and conditions and the outcomes that would be produced by competitive market forces. No matter which way Sprint turns, it must pay a penalty. Sprint is penalized if it buys too much special access, a counter intuitive situation rarely found in genuinely competitive environments. Sprint is penalized if it buys too little special access, or if it buys any amount—large or small—that does not involve a loyalty commitment. When Sprint marshals its resources to upgrade its backhaul to Ethernet, it is penalized once again for pursuing network efficiency. A competitive marketplace does not

---

[202] *Id*.

[203] Level 3 Response to Request II.A.18 at 1; tw telecom Response to Request II.A.18 at 1.

[204] ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

punish access, efficiency, and innovation. Yet that is the precise and perverse impact of the terms and conditions that prevail in the special access marketplace today.

VIII. UNREASONABLE SPECIAL ACCESS PRICES, TERMS, AND CONDITIONS UNDERMINE THE COMMISSION'S BROADBAND POLICIES AND HARM CONSUMER WELFARE

Special access services—both TDM-based and Ethernet[205]—provide "a platform for innovation, investment, and competition in virtually every sector of the economy."[206] As the CEO of INCOMPAS correctly noted, special access services are critical for all "new network builders—wired and wireless" and are "also an issue for the thousands of schools, hospitals, libraries, and government offices around the nation that rely on competitive broadband options that rely on special access services."[207] In addition, the Commission recently recognized that

---

[205] The TDM services provided by the incumbent LECs—both standalone offerings and inputs to the Ethernet services provided by competitive suppliers—continue to be a critical part of the special access marketplace. These TDM-based special access services are likely to remain the "basic building blocks of business data services for the foreseeable future," at least until such time as packet-based services are made available at competitive rates. *Designation Order* ¶ 13; *see also id*. ¶ 3 ("Market statistics underscore the continued unique role that incumbent LECs play in the provision of TDM-based special access services such as DS1 and DS3 channel terminations, at least on a nationwide basis."). As the Commission recently noted, "[d]espite the growth of newer technologies, preliminary analysis of the Commission's special access data collection shows that revenues from such TDM services continue to make up in the range of sixty percent of the roughly $40 billion annual special access market." *Id.* ¶ 2; *see also, e.g.*, *id.* ¶ 14 (noting that DS1 and DS3 channel termination sales increased from 2010 to 2013 for some of the largest price cap incumbent LECs and citing an estimate from Vertical Systems Group that the use of legacy business services will remain stable at least through 2017).

[206] Joint CLEC Comments at 2.

[207] Chip Pickering, *Here and There, We Need Competition Everywhere*, Morning Consult (Oct. 7, 2015), http://morningconsult.com/opinions/here-and-there-we-need-competition-everywhere/; *see also, e.g.*, COMPETIFY, About, http://trycompetify.com/about/ ("Whenever you use a smartphone, tablet, laptop, desktop, telephone, credit card reader, or ATM, that data must cross facilities controlled by one of a few dominant companies somewhere along the line.") ("Competify"); NASUCA/Rate Counsel March 2013 Reply at 6 ("The special access services that ILECs offer are essential inputs for large businesses, government

"the use of business data services can have a direct impact on the customers of chains or other multi-location businesses that rely on seamless communications between their different geographic locations or, in the wireless marketplace, on the strength of competition that brings them new products or lower prices."[208]

Because of the pivotal and ubiquitous importance of special access service to virtually every sector of the country's economy, the incumbent LECs' ongoing imposition of unlawful special access prices, terms, and conditions exacts an enormous toll on the nation, undermining the Commission's pro-innovation, pro-competition policies and forcing consumers to bear unjustified costs. The Commission acknowledged the critical impact of special access reform on its public policy objectives when it noted, in commencing the data collection process, that "a comprehensive market analysis will help us to take future steps to support broadband deployment and competition."[209] As we now show, the incumbent LECs' unreasonable prices and practices stifle innovation, discourage broadband deployment, suppress competition, impose unjustified costs, and are flatly inconsistent with the Commission's commitment to promoting new investment, job creation, and improved service quality.

---

agencies, and CLECs. End users (e.g., large business users) rely on ILEC-provisioned special access services in order to produce their goods and services.").

[208] *Designation Order* ¶ 3.

[209] *2012 Suspension Order* ¶ 93; *see also, e.g.*, Gary Arlen, *'Competify' Campaign Seeks FCC Action Against 'Scourge' of Broadband Behavior*, Broadcasting and Cable (July 13, 2015), http://www.broadcastingcable.com/news/washington/competify-campaign-seeks-fcc-action-against-scourge-broadband-behavior/142507 (reporting the CEO of INCOMPAS's assertion that "competition is a bipartisan, free market principle that should drive our country's broadband policy for the 21st Century so we can deliver better, faster, affordable broadband to all Americans").

Delaying Technological Innovation. The incumbent LECs' continued, and almost exclusive focus on their legacy TDM-based special access offerings should outrage every proponent of American innovation. In a properly functioning marketplace, competition would have compelled the incumbent LECs to upgrade their networks in order to provide the most advanced services possible, such as high-capacity Ethernet-based services.[210] Instead, the dearth of competition and effective regulation has given incumbent LECs the incentive and ability to slow down innovation in order to extract maximum profits from their legacy TDM-based services:

> While competitors have pushed deployment and innovation in packet-mode services for businesses, incumbent LECs have sought to avoid cannibalizing their more profitable legacy business services, such as high-priced DS3 services. As a result, the largest incumbent LECs have deployed next-generation packet-mode business services more slowly than competitors and only in response to innovations by competitors.[211]

Lack of ubiquity and competitive rates for Ethernet services allows incumbent LECs to remain dominant over TDM-based services,[212] further stalling the technology transition.

---

[210] Evidence that competition drives innovation can be seen in AT&T's response to Google's gigabit broadband services. For example, after Google Fiber entered the Kansas City area, AT&T built its own fiber network and "clearly aimed its prices to compete with Google Fiber," such that its packages "match exactly Google's speeds and rates." Scott Canon, *AT&T to Match Google Fiber Speeds, Prices in Kansas City and Suburbs*, Kansas City Star (Feb. 15, 2015), http://www.kansascity.com/news/business/technology/article10441850.html.

[211] Letter from Thomas Jones, Counsel Cbeyond, Inc., EarthLink, Inc., Integra Telecom, Inc., and tw telecom inc. et al., to Marlene H. Dortch, Secretary, FCC, at 4, WC Docket No. 05-25 (filed Nov. 2, 2012); *see also, e.g.*, Letter from Thomas Jones and Matthew Jones, Counsel, tw telecom inc., to Marlene H. Dortch, Secretary, FCC, at 15-16, WC Docket No. 05-25 (filed June 5, 2012) ("tw telecom and some of the other non-ILECs have been far more aggressive in marketing Ethernet than has generally been the case with the BOCs. This is likely due to a range of different factors, including the BOCs' historic desire to avoid cannibalizing their legacy services such as ATM, frame relay, and DSn services.").

[212] *See supra* n.199.

Eliminating the undue profitability from legacy services would encourage technological advances and innovation, such as a more timely transition to IP-based networks and the deployment of 5G mobile services, both of which are Commission priorities.[213] Moreover, providing all special access purchasers, including enterprise businesses and competitive broadband suppliers, with higher-capacity connections would foster the development of new services and features that would benefit all end users.

Deployment of 5G Wireless Services. As Chairman Wheeler recently recognized in his testimony before the House Subcommittee on Communications, wireless networks will need to undergo a tremendous densification as they implement 5G technologies.[214] Indeed, wireless networks of the future will require dramatic densification to accomplish the 1,000 fold increase in capacity anticipated with the deployment of 5G technology.[215] This densification will require the deployment of tens of thousands new cell sites and each of these cell sites will require connectivity. The "[f]ull benefits of network densification can be realized only if it is complemented by backhaul densification."[216]

To address this need for backhaul connectivity, carriers are looking at numerous technical solutions. Verizon, for example, recently announced it will rely on dark fiber to connect its

---

213 *See, e.g.*, *Technology Transitions Release* ¶ 1 (repeatedly emphasizing the Commission's efforts to "further," "speed[]," and "advance" the IP transition "without delay"); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al*., Notice of Proposed Rulemaking, 30 FCC Rcd. 11,878, ¶ 1 (rel. Oct 23, 2015) (seeking comment on "a regulatory framework that will help facilitate so-called Fifth Generation (5G) mobile services").

214 *Oversight of the Federal Communications Commission: Hearing before the Subcomm. on Commc'ns and Tech.*, 114 Cong. 69 (2015) (testimony of Thomas Wheeler, Chairman, FCC).

215 *See, e.g.*, Naga Bhushan, et al., *Network Densification: The Dominant Theme for Wireless Evolution to 5G*, Qualcomm Technologies, IEEE COMMUNICATIONS MAGAZINE, at 82 (Feb. 2014) ("IEEE Network Densification").

216 *Id.*

deployment of microcells.[217] The high cost of wired connections, however, presents a very real barrier for wireless carriers to overcome.[218] While carriers are working to develop alternative technologies, such additional work would not be required if wireless carriers could obtain affordable access to wired connections.

Undermining Broadband Deployment and Competition. The Commission repeatedly has emphasized that special access services are an important input for carriers' broadband service offerings and that the "costs associated with purchasing special access circuits can be a significant expense that impacts a carrier's ability to provide affordable broadband service, particularly to smaller, rural communities."[219] Indeed, the pernicious effects of the incumbent LECs' practices cannot be overstated—they both deter deployment of new competitive broadband networks and deprive consumers of access to affordable broadband service.[220]

Notably, special access reform can promote competition in multiple marketplaces, including those that do not depend on the availability of efficient special access services. For example, when "incumbent LECs tie the sale of non-special access services that are subject to

---

[217] Joey Jackson, *Dark Fiber Key to Future of Small Cells, Backhaul*, RCR Wireless (Dec. 21, 2015).

[218] *See, e.g.*, IEEE Network Densification at 88 ("Providing wired backhaul to these locations may be cost prohibitive.").

[219] *2012 Suspension Order* ¶ 94; *see also, e.g.*, *Qwest Order* ¶ 40; FEDERAL COMMUNICATIONS COMMISSION, *Connecting America: The National Broadband Plan*, at 47-48 (Mar. 17, 2010), https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.

[220] *See, e.g.*, Reply Comments of the NoChokePoints Coalition at 2, WC Docket No. 05-25 (filed Feb. 24, 2010) ("[B]roadband adoption rates in rural areas are depressed, in part because rural ISPs must charge rates high enough to cover extraordinarily high backhaul costs to reach the Internet backbone.") ("NoChokePoints Reply Comments"); NASUCA/Rate Counsel March 2013 Reply at 9 (noting that the terms and conditions imposed by the incumbent LECs "thwart rather than spur" the deployment of IP-based broadband networks).

competition to the sale of special access services that are not subject to competition, incumbent LECs harm competition in the non-special access service markets."[221]

Imposing Excessive Costs. One estimate calculates the annual amount of unreasonable special access overcharges to be at least $10 billion.[222] Furthermore, BT recently pointed out that "Americans are forced to pay twice as much as UK consumers [in a regulated marketplace] for both basic and superfast residential broadband," and Americans also "pay substantially more than consumers in major European economies."[223]

These unnecessary costs impair the ability of competitive LECs, both wireless and wireline, to compete effectively in retail telecommunications marketplaces.[224] They also raise

---

[221] Joint CLEC Comments at 34.

[222] Competify.

[223] BT Americas, *Special Access: Myths vs. Facts*, at 1 (Sept. 2015), http://trycompetify.com/wp-content/uploads/2015/09/Special-Access-Myths-vs-Facts-Sept-30-2015-FINAL.pdf; *see also, e.g.*, NASUCA/Rate Counsel March 2013 Reply at iii (excessive charges "depress economic activity and cause consumers to pay more than is economically efficient for goods and services that depend on ILEC-provided special access services"); Rate Counsel Comments at 3 ("Consumers ultimately pay for inflated prices either directly to ILECs (in the instance of large consumers) or indirectly in the prices they pay for non-ILEC telecommunications services (the services of competitive [LECs] or of wireless and broadband services, for example) as well as goods and services across the economy. The inefficient rates lead to loss of consumer welfare, and thwart competition."); Reply Comments of Media Action Grassroots Network at 4, WC Docket No. 05-25 (filed Feb. 24, 2010) ("[T]he high cost of special access prices trickles down to the consumer who either will not have broadband deployed to his or her community or has to pay higher prices for broadband Internet access.").

[224] *See, e.g.*, Ellen Muraskin, *Competify Group: Release of FCC Data Will Prove ILECs Exploit Monopoly Market Power*, Channel Partners (Oct. 8, 2015), http://www.channelpartnersonline.com/blogs/ellen-muraskin-blog/2015/10/competify-group-release-of-fcc-data-will-prove-il.aspx (quoting Sprint's Charles McKee as indicating that Sprint "want[s] to compete, but it is difficult to do that when you are subsidizing your competitors."); Windstream Submission at 7 ("Wholesale prices that significantly exceed the retail prices for equivalent capacities can preclude CLECs from competing in the retail market, which would leave the incumbent with little or no retail competition for high capacity business services.").

the costs of commercial companies, such as the members of the Ad Hoc Telecommunications Users Committee, who ultimately must recover those costs from the prices paid by consumers for their products.[225] Further, these excessive charges impact not-for-profit and governmental entities, including schools and universities, hospitals, public safety organizations, government agencies, and others that rely on special access services. In addition to the direct monetary costs, which are significant, the opportunity costs associated with these unwarranted assessments have ripple effects throughout American society. For example, a rate reduction could provide universities with "additional funds to restrain tuition increases, hire more educators, and pay for new facilities" and permit hospitals to "invest in advanced medical technologies or hire additional staff."[226]

Importantly, a reduction in the prices that schools and libraries participating in the Commission's E-rate program pay for special access services would enable them to maximize the benefits they receive from that program. In turn, students and community members would realize the benefits of a more efficient and effective E-rate program.

Undermining the Telecommunications Marketplace and Overall U.S. Economy. The record in this proceeding contains a variety of estimates on the adverse effects that the current special access prices and other terms have on the performance of the telecommunications

---

[225] *See, e.g.*, Comments of the Ad Hoc Telecommunications Users Committee at 6, WC Docket No. 05-25 (filed Aug. 8, 2007) ("[T]he Commission's failure to act in the face of the carriers' overcharges is now costing business customers $22.7 million per day, based on the most recent data filed by the carriers."); Comments of the Ad Hoc Telecommunications Users Committee at 3 n.8, WC Docket No. 05-25 (filed Feb. 24, 2010) (noting that individual Ad Hoc members reported that they annually bill more than $250 million for DS1 and DS3 circuits alone and that Committee-wide demand for these services is likely to be at least twice as great).

[226] NoChokePoints Comments at 5.

marketplace. One report concluded that "investment and job creation in the telecommunications sector has lagged behind the economy as a whole."[227] Similarly, Drs. Besen and Mitchell previously have pointed out that the special access loyalty and tying provisions imposed by the incumbent LECs can lead to reduced investment in research and development. This is because competitive providers "anticipate that future sales will not be adequate to justify such investments."[228]

More broadly, reforming the current special access regime could promote innovation in virtually every sector of the country's economy. Such comprehensive reform, for example, would "allow manufacturing companies to invest in retooling or hiring additional employees to expand production and increase sales, rather than wasting money on excessive special access prices or being forced to bear the substantial costs of self-provisioning telecommunications services."[229] Similarly, special access relief would "lower the costs of launching businesses, which will lead to a cycle of more startups, more jobs, and more innovation,"[230] and would "provide small businesses with affordable access and choice regarding the services they need to grow and create new jobs."[231] Indeed, one report concluded that "a 50% reduction in [s]pecial access prices would result in a $20-$22 billion increase in U.S. output, a $4.4-$4.8 billion

---

227 SMGC Report at iii.

228 Joint CLEC Comments at 33; *see also, e.g.*, NoChokePoints Reply Comments at 5-6 ("Every dollar that a special access purchaser overpays to a price cap LEC for special access is a dollar that is not available to deploy new technology to consumers, upgrade other facilities, construct a new cell site, or invest in research for innovative new products.").

229 NoChokePoints Reply Comments at 6.

230 Evan Engstrom, *Starting Up the Broadband Economy*, Recode (Dec. 3, 2015), http://recode.net/2015/12/03/starting-up-the-broadband-economy/.

231 *See* Comments of the Office of Advocacy, U.S. Small Business Administration at 5, WC Docket No. 05-25 (filed May 24, 2012) ("Office of Advocacy Comments").

increase in employee earnings, an increase of between 94,000 and 101,000 jobs and an increase in value added to the U.S. economy of between $11.8 - $12.4 billion."[232]

Hindering Service Quality Improvements. The current broken special access marketplace also undermines the Commission's efforts to encourage ongoing improvements in the quality of wireline and wireless services provided to consumers. As Level 3 noted, the lack of competitively provided special access connections "causes wired networks and wireless devices to perform poorly (or not as well as they could)," because a "single unchallenged provider of special access has little incentive to improve service quality, increase capacity or hold prices down."[233] Moreover, excessive special access prices also directly affect the incentive and the ability of the incumbent LECs' carrier customers to improve the quality of their own offerings. For example, when special access costs are higher, the "financial disincentive[s]" also are higher for wireless companies that seek to deploy "more cell towers to provide better service, as it would require purchasing even more of these high-cost access lines."[234] Reforming the existing special access regulatory regime would restore wireless providers' incentive to add additional cell sites.

IX. THE COMMISSION MUST DEVELOP AND IMPLEMENT REMEDIES THAT ADDRESS THE UNREASONABLE RATES, TERMS, AND CONDITIONS FOR INCUMBENT LEC SPECIAL ACCESS SERVICES, BOTH NOW AND IN THE FUTURE

---

[232] Stephen E. Siwek, *Economic Benefits of Special Access Price Reductions*, at 3, attached to Letter from Maura Corbett, Spokesperson, NoChokePoints Coalition, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Mar. 15, 2011).

[233] Level 3 Comments at 2.

[234] Michael Mooney, *Special What? Why You Should Care about the FCC's Special Access Investigation*, Beyond Bandwidth, Level 3 Communications Blog (Oct. 19, 2015), http://blog.level3.com/open-internet/special-what-why-you-should-care-about-the-fccs-special-access-investigation/.

As explained above, the extensive data collected by the Commission in this proceeding show that there is insufficient actual or potential competition in the special access marketplace to discipline incumbent LEC behavior. As a result of their market power, incumbent LECs charge competitors excessive rates and impose anticompetitive terms and conditions to the detriment of consumers, competition, and innovation. In the face of these market conditions, the Commission must take immediate action to mitigate the ongoing harms created by the special access marketplace and implement a plan that makes certain that the rates, terms, and conditions are just and reasonable on a going-forward basis.

A. The Commission Can Implement Interim Measures to Inject Immediate Relief into the Special Access Marketplace

The Commission should implement immediate reforms to begin the process of repairing the broken current special access marketplace. As the NoChokePoints Coalition correctly noted more than *five years ago*, "[e]very month that reform is delayed represents hundreds of millions of dollars in overpayments and further injury to broadband deployment, innovation, and job growth."[235] Similarly, the Small Business Administration noted more than three years ago that the FCC's "special access docket requires particularly urgent attention."[236]

1. Reverse Phase II Pricing Flexibility

First, as the Commission concluded in 2012, the predictive triggers that a previous Commission adopted to identify areas where incumbent LECs were subject to competition

---

[235] NoChokePoints Comments at 2-3; *see also, e.g.*, NASUCA/Rate Counsel March 2013 Reply at 33 ("The longer the delay in addressing the anticompetitive terms and conditions for special access that now exist, the higher the excessive profits that ILECs earn, the more harm to the FCC's goal of competition, and the greater the drag on the nation's economy resulting from economically inefficient pricing signals."); Joint CLEC Comments at 13 ("each month that passes is another month in which American businesses must make do without the benefits of a truly competitive business broadband marketplace").

[236] Office of Advocacy Comments at 5.

sufficient to warrant pricing flexibility were plainly wrong. The data now makes it clear that there is almost no competition anywhere in the special access marketplace regardless of what lens is used to view the market. Accordingly, to comply with sections 201 and 202 of the Act, the Commission must correct the unreasonable impact of the now-discredited triggers and return areas that are currently subject to Phase II pricing flexibility to the price cap regulatory regime. The Commission must also account for Ethernet services and take steps to bring such services under the price cap regime.

Subsequently, once it adopts a reasonable method of identifying areas with sufficient competition to produce just and reasonable rates, terms, and conditions, the Commission may find that there are geographic areas that are sufficiently competitive to warrant pricing flexibility. The Commission can account for these limited areas facing effective competition when it puts in place its long-term resolution at the conclusion of this proceeding.

2. Find Anticompetitive Loyalty Commitments Unenforceable

The Commission has ample authority to take this action at this time and is not obligated to first undertake a section 205 rate prescription proceeding. As the Joint CLECs explained in a recent *ex parte*, the application of price caps does not constitute an actual or *de facto* rate prescription, because imposing price caps does not involve setting individual rates.[237] To the contrary, price caps reflect only the Commission's "'tentative opinion' about the dividing line

[237] Letter from Thomas Jones, Counsel, Birch Communications, Inc., BT Americas Inc., and Level 3 Communications, LLC, to Marlene H. Dortch, Secretary, FCC, at 4-5, WC Docket No. 05-25 (filed Aug. 28, 2015) ("Joint CLEC *Ex Parte*").

between reasonable and unreasonable rates for the limited purpose of exercising [its] suspension power" under section 204.[238]

As described above, the terms and conditions comprising incumbent LEC loyalty commitments are anticompetitive and allow incumbent LECs to preserve and expand their market dominance. The Commission therefore should take immediate action to address the anticompetitive impact of these terms and conditions.[239]

Specifically, the Commission should find that incumbent LEC loyalty commitments are unenforceable, a remedy it has implemented repeatedly in the past to address exclusive dealing arrangements for telecommunications.[240] As the Commission recognized in these contexts, prohibiting the enforcement of unlawful commitments is preferable to "waiting until contracts expire and are replaced by contracts without exclusivity provisions," as "allowing expiration would delay development of competition." The Commission also noted that the parties in question had "been on notice for more than seven years that the Commission might prohibit both

---

238 *See Policy and Rules Concerning Rates for Dominant Carriers*, Report and Order and Second Further Notice of Proposed Rulemaking, 4 FCC Rcd. 2873, ¶ 895 (1989); *see also* 47 U.S.C. § 204.

239 The Commission should not, however, suspend the pricing plans containing these provisions. This would only reward the incumbent LECs, as it would force current customers to purchase special access services at equally unjust and unreasonable rack rates, or to accept unjust and unreasonable restrictions on circuit portability.

240 *See, e.g.*, *Competitive Networks Order* ¶¶ 1, 9; *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd. 20,235, ¶ 1 (2007); *MDU Exclusivity Order* ¶ 13 ("We find that immediately prohibiting the enforcement of such provisions is more appropriate than phasing them out or waiting until contracts expire and are replaced by contracts without exclusivity provisions"); *see also W. Union Tel. Co. v. FCC*, 815 F.2d 1495, 1501 (D.C. Cir. 1987) (The FCC can "modify . . . provisions of private contracts when necessary to serve the public interest.").

their entering, and enforcement of, such provisions"[241]—here, the incumbent LECs have been on notice for *well over a decade*.

3. Offer Purchasers a "Fresh Look"

At the same time, the Commission should offer purchasers a "fresh look" to consider purchasing competitive alternatives in the small areas of the country where such an alternative exists. To effectuate this relief, the Commission should immediately suspend enforcement of incumbent LEC termination and portability penalties, pending the completion of comprehensive reform. While this action would provide relief in only limited circumstances, it represents a quick and easily implemented mechanism for allowing competition to take root in the few places where the broken market currently makes competition possible at all. Even in the vast majority of areas where purchasers would have no competitive options and therefore would be unable to switch from incumbent LEC provision of services, this action could create an incentive for more meaningful competition to develop in the short term as concentrated clusters of unlocked demand become available to a new entrant. Indeed, the Commission previously used a "fresh look" approach to eliminate barriers to special access competition posed by early termination liabilities, thereby allowing purchasers to take advantage of regulatory reforms that expanded interconnection.[242]

---

[241] *MDU Exclusivity Order* ¶ 13.

[242] *See Expanded Interconnection with Local Telephone Company Facilities*, Second Memorandum Opinion and Order on Reconsideration, 8 FCC Rcd. 7341, ¶¶ 3-41 (1993); *Expanded Interconnection with Local Telephone Company Facilities*, Memorandum Opinion and Order, 9 FCC Rcd. 5154, ¶¶ 197-208 (1994), *remanded on other grounds, Pacific Bell v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996) (limiting termination liabilities in current contracts on the grounds that "certain long-term special access arrangements may prevent customers from obtaining the benefits of the new, more competitive access environment").

The Commission's IP transition goals further justify a "fresh look" remedy. As explained above, incumbent LECs are leveraging their continued dominance over TDM services to control Ethernet services, delaying progress of U.S. telecommunications and the applications they support, and threatening to repeat the unfortunate history of special access competition that has cost U.S. consumers so much. Incumbent LEC penalties are the core of these leveraging strategies, as they allow incumbents to condition migration to Ethernet on continued use of the incumbent LEC as the Ethernet provider. The Commission previously eliminated termination liabilities imposed by an incumbent to reduce the risk of precisely this kind of leveraging.[243]

B. The Commission Must Act Quickly to Establish a Permanent Regulatory Regime

In addition to implementing the interim measures outlined above, the Commission also must take immediate steps to craft a regulatory regime that will govern special access prices, terms, and conditions in areas that are not subject to effective competition going forward. In exploring the suitable mechanisms for doing so, the Commission may find the econometric analysis of the data it has gathered in this proceeding to be helpful in determining the appropriate adjustments to the current special access rates. Naturally, such analysis must be undertaken carefully and would need to address issues such as those described herein.

For example, econometric analysis may enable the agency to determine "benchmark" prices that can be used to adjust prices for special access services in the vast majority of locations where competition does not constrain the incumbent LECs. Of course, to establish

---

[243] *Competition in the Interstate Interexchange Marketplace*, Memorandum Opinion and Order on Reconsideration, 7 FCC Rcd. 2677, ¶¶ 23-28 (1992) (eliminating termination liabilities for certain current AT&T customers pursuant to section 205, on the grounds that "AT&T's termination liability clauses will be unreasonable in light of the risk of leveraging in 800 services").

reasonable benchmarks, the Commission would need to ensure that its analysis employs an appropriate measure of the "price" of the incumbent LEC's service.[244] For instance, in assessing the relationship between prices and investment by incumbent LEC competitors, the Commission's analytic model should focus on the marginal price of special access services and not the much higher average price.[245] The Commission's analysis also would need to take into account: (1) the extent to which the terms and conditions in the special access agreement governing the service affects the price; and (2) the regulatory regime that governs the incumbent LEC at the particular location where the service is offered.

The Commission also could perform an econometric analysis to revise, in part, the X-factor, which historically governed the growth rate of special access not subject to pricing flexibility. The initial X-factor was based on a total factor productivity ("TFP") growth rate that compared input costs to output prices. The Commission could use the collected data to measure the output and undertake other statistical techniques to update the X-factor. In addition, the Commission should explore other methodologies for updating an X-factor, including imputation of an X-factor based on changing prices of comparable services over time. The Commission's data collection could provide one pricing point for such an analysis. Other available pricing data that could be used for an imputed X-factor include inputs to historic Commission pricing report (*e.g.*, ARMIS data), posted tariff rates, competitor data, and cost models that could form a basis of price computation.

Finally, the Commission could explore the use of cost models as part of its development of a long-term special access regulatory regime. For example, the Commission could use

---

[244] *See* Sprint Comments at 12-16.

[245] For a more fulsome discussion, *see id*.

existing cost models to compare pricing data in order to demonstrate that current market prices for special access services are unreasonable.[246] Cost models also may allow the Commission to develop price caps for special access services that do not face effective competition based on costs as computed by these models, including a reasonable return on investment.

C. All Remedies the Commission Implements Should Extend to Ethernet Special Access Offerings

Irrespective of the regulatory regime that the Commission ultimately pursues, both the immediate and longer-term solutions that the Commission implements should extend to Ethernet special access products, including those currently subject to forbearance. As outlined above, the incumbent LECs' market power in the special access marketplace is derived largely from their control of last-mile facilities and other economies of scale and scope.[247] As a result, their ability to exercise market power will persist regardless of whether the special access offerings are TDM-based or Ethernet. Moreover, because TDM-based and Ethernet special access services serve as effective substitutes, they should be subject to the same regulatory treatment. If, as the incumbent LECs argue, special access competition increases in markets where Ethernet services are rolled out, then providers in those markets can enjoy pricing flexibility in the same way that they do in any market with sufficient competition.

Notably, the Commission has the authority to reverse the existing grants of forbearance from dominant carrier regulation and impose rate regulation on Ethernet services at any time, whether by granting the pending petition to reverse forbearance[248] or based on the record of this

---

[246] *See, e.g.*, Windstream Submission.

[247] *See supra* at section V.B.

[248] *See* Petition to Reverse Forbearance.

proceeding.[249] There can be no doubt that the incumbent LECs have received ample notice that the Commission could reverse forbearance and adopt rate regulation of their non-TDM-based special access services.[250] There also can be no doubt that the Commission can only fully address the consumer and competitive harms outlined herein by implementing a remedy that addresses the competitive shortfalls that face the special access marketplace at large.

X. CONCLUSION

The broadband services at issue in this proceeding form the core of the nation's information economy. From the lower-capacity dedicated lines that power our ATMs to the higher-capacity connections that link office buildings and mobile phone towers to the Internet, special access services are essential to our country. Failure to address this marketplace will hinder the transition to IP technologies, including the movement to advanced 5G mobile networks. Recognizing this fact, the Commission undertook the most comprehensive data collection in the agency's history to: review our "special access rules to ensure that they reflect the state of competition today and promote competition, investment, and access to dedicated

---

[249] *See, e.g.*, *Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd. 18,705, ¶ 28 n.120 (2007) (noting that the Commission retains "the option of revisiting th[ese] forbearance ruling[s]"); *Petition of the Embarq Local Operating Companies for Forbearance Under 47 U.S.C. § 160(c) from Application of Computer Inquiry and Certain Title II Common-Carriage Requirements; Petition of the Frontier and Citizens ILECs for Forbearance Under Section 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Their Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd. 19,478, ¶ 27 n.113 (2007); *Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, Memorandum Opinion and Order, 23 FCC Rcd. 12,260, ¶ 31 n.127 (2008); *Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903, 911 (D.C. Cir. 2009) (noting that the Commission's grants of forbearance were not "chiseled in marble" and could be reversed in the "ongoing Special Access Rulemaking proceeding").

[250] *See* Joint CLEC *Ex Parte*; Reply Comments of BT Americas, Cbeyond, EarthLink, Integra, Level 3, and tw telecom at 15-26, WC Docket No. 05-25 (filed May 31, 2013).

communications services businesses across the country rely on every day to deliver their products and services to American consumers."[251]

The data the FCC collected demonstrates that the state of competition is dire. Viewed from any vantage point, the conclusion is the same: there is inadequate competition to discipline incumbent LEC prices, terms, and conditions. As demonstrated in these comments:

- The incumbent LEC is the *only* provider of special access service at a huge majority of locations, 73 percent, meaning that there is no actual or potential competition.
- There is only one other provider competing with the entrenched incumbent LEC at virtually all of the remaining locations, meaning that in an enormous 97 percent of locations are served by only one or two suppliers, meaning that there is inadequate competition to discipline incumbent behavior.
- And where is the competition that the incumbent LECs claim is so abundant? Almost nowhere. There are three suppliers in a very small 2 percent of locations, and four or more suppliers in an even smaller 1 percent of locations.

Approaching the Commission competition data from another angle, by using bandwidth-based shares to calculate HHI values, confirms these results. HHI exceeds the "Highly Concentrated" level in a jaw-dropping 99 percent of census blocks in which an incumbent LEC provides special access services. Even when disaggregating the FCC's data into bandwidth-based product market "buckets," the results are essentially the same. In each of the buckets analyzed herein, the incumbent LEC remains dominant in the overwhelming majority of census blocks in which they provide service.

The Commission's data collection also shows that every responding incumbent LEC employs the anticompetitive terms and conditions that the FCC's inquiry sought to uncover. Consequently, it is now clear that these companies use unjust and unreasonable loyalty contracts, overage charges, shortfall payments, and excessive early termination fees to perpetuate their

---

[251] *2012 R&O and FNPRM* ¶ 1.

historical dominance of the marketplace, and to restrain any competition in the few locations where it attempts to gain a foothold.

The Commission's data collection has accomplished its job. It has allowed the FCC to see through ten years of incumbent LEC delay tactics, obfuscation, and excuses. The time to act is now, and the data collection provides the FCC with all it needs to move ahead. As a first step, the Commission should adopt immediate interim measures to stop the bleeding in the special access marketplace by: (1) returning services subject to Phase II pricing flexibility to the price cap regime and taking steps to bring Ethernet up price caps, (2) declaring anticompetitive loyalty commitments to be unjust and unreasonable, and (3) providing purchasers with a "fresh look" so they can avail themselves of competition in the few places where it exists. Next, the Commission must quickly implement long-term repairs to the special access regulatory system, through: (1) developing pricing benchmarks to adjust prices in areas where competition does not constrain prices, (2) revising the X-factor, or (3) using existing models that measure costs of service to set appropriate caps on prices.

Respectfully Submitted,

Charles W. McKee
Vice President, Government Affairs
Federal & State Regulatory
Chris Frentrup
Director, Senior Economist
Sprint Corporation
900 Seventh Street NW, Suite 700
Washington, DC 20001
(703) 433-3205

A. Richard Metzger, Jr.
Emily Daniels
Lawler, Metzger, Keeney & Logan, LLC
2001 K Street NW, Suite 802
Washington, DC 20006
(202) 777-7700

Paul Margie
Jennifer Bagg
Walter E. Anderson
V. Shiva Goel
Harris, Wiltshire & Grannis LLP
1919 M Street NW, 8th Floor
Washington, DC 20036
(202) 730-1300

Counsel for Sprint Corporation

ATTACHMENT 1:
DECLARATION OF STANLEY M. BESEN AND BRIDGER M. MITCHELL

ATTACHMENT 2:
DECLARATION OF WILLIAM P. ZARAKAS AND SUSAN M. GATELY

ATTACHMENT B

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

DECLARATION OF STANLEY M. BESEN AND BRIDGER M. MITCHELL

January 27, 2016

Table of Contents

DECLARATION OF STANLEY M. BESEN AND BRIDGER M. MITCHELL

I. QUALIFICATIONS

1. My name is Stanley M. Besen. I have published widely on telecommunications economics and policy, intellectual property, and the economics of standards and have consulted to many companies in the telecommunications and information industries. I have served as a Brookings Economic Policy Fellow, Office of Telecommunications Policy, Executive Office of the President (1971-72); Co-Director, Network Inquiry Special Staff, Federal Communications Commission (1978-80); Coeditor, RAND Journal of Economics (1985-88); Senior Economist, RAND Corporation (1980-92); a member of the Editorial Board of Information Economics and Policy (1992-2004); and Vice President, Charles River Associates (1992-2008). I currently serve as a member of the Editorial Board of Economics of Innovation and New Technology. I have taught at Rice University (1965-1980), where I was the Allyn R. and Gladys M. Cline Professor of Economics and Finance; Columbia University (1988-1989), where I was the Visiting Henley Professor of Law and Business; and the Georgetown University Law Center (1990-1991), where I was Visiting Professor of Law and Economics. I hold a Ph.D. in Economics from Yale University (1964). My CV is included as Attachment A to this Declaration.

2. My name is Bridger M. Mitchell. I am an expert in competition and pricing in the telecommunications industry and have provided expert testimony, litigation support, and economic consulting services to numerous business and government clients. My research on major regulatory issues encompasses the theory and practice of telecommunications pricing, competition, and equal access in local telephone markets, interconnection in telecommunications networks, international telephone rates, pole attachment rates, and

broadcasting and cable television. I have developed pioneering models of the cost structure of a cable television firm and the incremental costs of local telephone networks. I taught economics at Stanford University, as Assistant Professor of Economics from 1966 to 1971 and as Acting Associate Professor of Economics in 1976, and at UCLA from 1973 to 1975 as Lecturer in Economics. From 1972 to 1994, I served as Senior Economist, RAND Corporation. From 1994 to 2008, I was a Vice President of Charles River Associates and, from 2008 to 2015, was a Senior Consultant to the firm. I hold a Ph.D. in Economics from the Massachusetts Institute of Technology. My CV is included as Attachment B to this Declaration.

II. OVERVIEW AND SUMMARY OF CONCLUSIONS

3. In order to "advance the public interest goals of just, reasonable, and nondiscriminatory rates,"[1] the Federal Communications Commission ("FCC" or "Commission") implemented a system of price cap regulation for special access services provided by the largest incumbent local exchange carriers ("ILECs") because it had concluded that ILECs dominated the provision of these services.[2] In the late 1990s, however, the Commission granted pricing flexibility to ILECs in limited geographic areas that were identified using "competitive showings (also referred to as 'triggers')."[3] These triggers

---

[1] *Special Access for Price Cap Local Exchange Carriers*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd 16318, ¶ 2 (2012) ("*2012 Data Collection Order*" or "*Further Notice*").

[2] *Policy and Rules Concerning Rates for Dominant Carriers*, Second Report and Order, 5 FCC Rcd 6786, ¶¶ 257-59 (1990), *aff'd*, *Nat'l Rural Telecom Ass'n v. FCC*, 988 F.2d 174 (D.C. Cir. 1993).

[3] *Special Access for Price Cap Local Exchange Carriers*, Report and Order, 27 FCC Rcd 10557, ¶ 11 (2012) ("*2012 Report and Order*") (describing grants of pricing flexibility).

were based not on the existence of actual competition but instead on predictions of future entry by new facilities-based suppliers in a sufficient number of ILEC wire centers in a Metropolitan Statistical Area ("MSA"). The Commission has now recognized that its triggers have resulted in granting ILECs pricing flexibility in areas that were not, in fact, competitive. In particular, the Commission has concluded that using an MSA as the geographic area to which to apply a trigger was too broad and, as a result, often contained areas where ILECs did not face significant competition.[4] The Commission has also concluded that competitive conditions can vary greatly among different types of special access service[5] and that the predictive judgments inherent in its triggers were flawed.[6]

4. Specifically, in its *Qwest Forbearance Order* in 2010, the Commission found that: (a) wholesale loops and local transport are in separate markets;[7] (b) circuits of differing capacities are likely to constitute separate markets;[8] (c) each customer location is a separate market, although customers facing similar competitive choices could be aggregated "for reasons of administrative convenience";[9] and (d) there were barriers to

---

4 *Id.* ¶¶ 35, 45 (finding that its "rules permitted MSA-wide relief on the basis of extremely concentrated demand in many instances" and noting that "contrary to the Commission's prediction in 1999, MSAs have generally failed to reflect the scope of competitive entry," which has been "far smaller than predicted").

5 *See Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd 8622, ¶ 49 (2010), *aff'd, Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012) ("*Qwest Forbearance Order*" or "*Qwest*").

6 *See generally 2012 Report and Order*.

7 *Qwest Forbearance Order* ¶ 48.

8 *Id.* ¶ 49.

9 *Id.* ¶ 64.

entry in the provision of special access services.[10] Although the Commission found that there were insufficient data to identify the locations of competitive facilities or to calculate market shares for wholesale markets, it concluded, nonetheless, that there were no "significant alternative sources of wholesale inputs" in the Phoenix MSA.[11] It also found that there were many routes for which Qwest was the only provider[12] and that "Qwest [had] not demonstrated that there exists significant actual or potential competition for enterprise services by competitors that rely on their own last-mile connections to serve customers" in the Phoenix MSA.[13]

5. Having recognized the disparate nature of competitive supply within MSAs, as well as the need to distinguish among different types and capacities of special access services, the Commission proposes as one step in this proceeding to undertake a traditional market power analysis.[14] This requires "a thorough analysis, which traditionally begins with a delineation of the relevant product and geographic markets, and then considers market characteristics, including market shares, the potential for the exercise of market power, and whether potential entry would be timely, likely, and sufficient to counteract the exercise of market power."[15]

---

10 *Id.* ¶ 72.

11 *Id.* ¶¶ 70, 76.

12 *Id.* ¶ 77.

13 *Id.* ¶ 87.

14 *2012 Data Collection Order* ¶ 66.

15 *Qwest Forbearance Order* ¶ 28.

6. In order to carry out the traditional market power analysis, the Commission required special access providers and purchasers to submit a significant amount of data.[16] Analyses of these data should enable the FCC to more accurately distinguish products and geographic areas where ILECs are subject to effective competition from products and geographic areas where ILECs retain significant market power.

7. In turn, the Commission will be able to make any necessary changes to its existing pricing regulations, or to develop new policies, that ensure that special access prices are just, reasonable, and nondiscriminatory. As the Commission has stated:

> Once the data are collected and analyzed, we may modify the existing pricing flexibility rules or adopt a new set of rules that will apply to requests for special access pricing flexibility. . . . [W]e propose to adopt rules that will allow for the relaxation or even the elimination of price cap regulation where we find the presence of actual or potential competition sufficient to ensure that rates, terms and conditions for special access services remain just and reasonable. . . . [17]

The Commission also sought comment on "what steps the Commission should take where relief has been provided under our existing rules and where the data and our analysis demonstrate that competition is not sufficient to discipline the marketplace."[18]

8. In this Declaration, we begin by discussing the conclusion, reached by the Commission and others, that special access product and geographic markets should be narrowly defined for purposes of measuring their competitiveness. We then summarize the results

---

16 *See generally 2012 Data Collection Order.*

17 *Id.* ¶ 80.

18 *Id.* ¶ 57.

of our analyses of the data[19] that have been submitted to the Commission and released for review by approved parties in the Secure Data Enclave.[20]

9. We first report data on the *number* of competitive local exchange carriers ("CLECs")[21] that provide special access service both at individual locations and in census blocks. We then report *market shares* that are based on the *quantities* of special access services sold and on *revenues* from the sale of special access services. Based on our analyses of these data, we conclude that the vast majority of special access product and geographic markets are not effectively competitive.

III. THE RELEVANT PRODUCT AND GEOGRAPHIC MARKETS FOR SPECIAL ACCESS SHOULD BE DEFINED NARROWLY

10. In this Section, we describe the appropriate product and geographic markets for the purpose of our structural analysis of the data collected by the Commission. These market definitions follow the methodology used by the Commission and the antitrust agencies for competitive analysis. In particular, we emphasize the importance of analyzing, where possible, various separate special access product markets. We also stress the importance of analyzing geographic markets at a granular level, initially the individual building location, because use of overly broad geographic areas would significantly overestimate competition in many areas.

---

19 We have carried out our analyses in conjunction with the Brattle Group and SMG Consulting, who have filed a separate declaration that provides additional detail about the data sources that they have employed and the calculations that they have performed. Declaration of William P. Zarakas and Susan M. Gately ("Zarakas/Gately Decl.").

20 Because of concerns about the privacy of respondents and critical infrastructure security issues, not all of the data that the Commission collected were made available to reviewing parties.

21 *See* Zarakas/Gately Decl. ¶ 12.

11. ***Product Markets.*** As Mitchell has explained in this proceeding, for a special access customer, "channel termination and channel mileage are not substitutes . . . [and] therefore [are] distinct product markets."[22] Mitchell further has explained that "[c]hannel termination and channel mileage products are also distinguished by differences in capacity."[23] DS1 and DS3 services, which are provided using TDM technology, are effectively in separate product markets because, at the normally prevailing market prices, a small but significant and non-transitory increase in the DS1 price would not cause purchasers of DS1 service to substitute purchases of DS3 service.[24]

12. Although special access services historically have been circuit-based, carriers are increasingly using packet-based services, such as Ethernet products, to supply dedicated access links. Where carriers offer packet-based services that users regard as substitutes for TDM-based circuits they should be considered part of the same product market. Moreover, if, in response to a price increase by a hypothetical monopolist of DS3 service, enough customers would choose to purchase packet-based service in lieu of purchasing one or more TDM-based DS3 circuits and thereby make the price increase

---

[22] Declaration of Bridger M. Mitchell, attached to Comments of Sprint Nextel Corporation, WC Docket No. 05-25, ¶ 50 (Jan. 19, 2010) ("2010 Mitchell Decl."). Note that special access backhaul service supplied at the cell sites of wireless carriers is in the same product market as special access service of similar bandwidth supplied to other purchasers in the same geographic market.

[23] *Id.* ¶ 51.

[24] Competitive supply of stand-alone DS1 channel terminations is rarely economic. However, a DS3 circuit is functionally equivalent to 28 DS1 circuits and, if a carrier has DS3 channel termination facilities, it can channelize them to provide DS1 service. Thus, the availability of DS3 services in a geographic market can potentially constrain DS1 channel termination prices.

unprofitable, the products should be viewed as part of the same relevant market. Conversely, at the point at which differences between a packet-based service and a high-capacity circuit-based service are so substantial that enough customers would not switch services in response to a price increase to make the increase unprofitable, the products should not be considered to be in the same antitrust market.

13. Note that, for the purpose of determining actual or potential competition, it does not matter whether circuit-based and packet-based services are in the same market if the ILEC is the only provider of both services or is one of a small number of providers and has very large market shares of both services. In that circumstance, Commission intervention would be needed to prevent the exercise of market power with respect to both types of service.

14. The conclusions we set forth above are based on the widely accepted conclusion that different special access products should be treated as different relevant antitrust product markets. As previously noted, the Commission found in *Qwest* that: (a) loops and dedicated local transport are in distinct product markets;[25] and (b) circuits of differing capacities are likely to be in separate product markets.[26] Similarly, in connection with the AT&T/BellSouth merger, the Commission noted that the "services provided over different segments of special access (*e.g.*, channel terminations and local transport) constitute separate relevant product markets, which may be subject to varying levels of

---

25 *Qwest Forbearance Order* ¶ 48.

26 *Id.* ¶ 49.

competition . . . [and that], in general, different capacity circuits are likely to constitute separate relevant product markets as well."[27]

15. This view also has been expressed by others that have analyzed the supply of special access services. For example, the Government Accountability Office ("GAO") analyzed prices in the special access marketplace separately for channel terminations, interoffice mileage, DS1, and DS3 service.[28] In a later report, the National Regulatory Research Institute ("NRRI") "found that . . . the level of competition varies by location, circuit capacity, and service component."[29]

16. Note that services provided on a "best-efforts" basis are not regarded by most purchasers as substitutes for special access dedicated circuits at guaranteed service levels.[30] Thus, "best efforts" services should not be included in the special access product market.

17. ***Geographic Markets.*** The Commission has concluded that analyzing competitive conditions for special access service in MSAs can be highly misleading because these

---

27 *AT&T Inc. and BellSouth Corporation, Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd 5662, ¶ 30, n.94 (2007).

28 United States Government Accountability Office, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO-07-80, at Appendix II, *Analysis of Average Revenue Data and List Prices* (Nov. 2006) ("GAO Report").

29 P. Bluhm and R. Loube, *Competitive Issues in Special Access Markets*, National Regulatory Research Institute, at iii (rev. ed. first issued Jan. 21, 2009), attached to Letter from James Bradford Ramsay, National Association of Regulatory Utility Commissioners, to Marlene H. Dortch, FCC Secretary, WC Docket No. 05-25 (June 12, 2012). The authors also concluded that the "FCC should . . . recognize that circuit capacity is an important variable in competition, differentiate between markets for channel terminations and markets for interoffice transport, and adopt a finer geographic scale than the MSA for measuring the competitiveness of special access markets." *Id.* at v.

30 *See, e.g.*, Declaration of James A. Anderson, ¶ 10, attached to Comments of XO Communications, WC Docket No. 05-25 (Feb. 11, 2013).

large areas often contain smaller geographic areas across which competitive conditions are widely disparate. For example, the Commission noted in its *UNE Order* that it had:

> [P]reviously determined that a geographic area as large as a MSA is so large and varied that such a grouping is prone to significantly overbroad impairment determinations . . . [and that], even if transport facilities are widely deployed throughout part of an MSA . . . , it would be inappropriate to infer a lack of impairment on every route in every part of that MSA. . . . Due to the wide variability in market characteristics within an MSA, MSA-wide conclusions would substantially over-predict the presence of actual deployment, as well as the potential ability to deploy.[31]

18. In the same *Order*, the Commission concluded that "an MSA-wide approach . . . would require an inappropriate level of abstraction, lumping together areas in which the prospects for competitive entry are widely disparate."[32] Similarly, in the *2012 Report and Order*, the Commission found that "highly concentrated demand [occurs] in areas far smaller than the MSA."[33]

19. As Mitchell previously noted, the appropriate geographic market for analyzing special access channel terminations is the building location:

> The Merger Guidelines' test suggests that the relevant special access geographic market for channel termination service is the building in which the customer is located. . . . A larger area – multiple buildings or the area served by a wire center – would be excessively large, because the customer's cost of switching to service available at a different building would not prevent the hypothetical monopoly supplier of the building from sustaining a price increase in that building.[34]

---

31 *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd 2533, ¶ 82 (2005).

32 *Id.* ¶ 155.

33 *2012 Report and Order* ¶ 36.

34 2010 Mitchell Decl. ¶ 35.

20. There is broad agreement with this position. For example, in the *Further Notice*, the Commission reiterated that "[c]ompetition in the provision of special access appears to occur at a very granular level – perhaps as low as the building/tower."[35] Similarly, the Commission has concluded that:

> [T]he relevant geographic market is a particular customer's location, because it would be prohibitively expensive for an enterprise customer to move its office location in order to avoid small but significant and nontransitory increases in the price of special access services, and because there are significant entry barriers to putting competitive last-mile facilities into place.[36]

21. The GAO also concluded that "the FCC's competitive triggers – which look at competition at the wire center level – may not adequately predict competition at the building level throughout an MSA" and therefore that "the extent of competitive entry in a market [should be analyzed] at the level of individual buildings."[37]

IV. A TRADITIONAL MARKET POWER ANALYSIS DEMONSTRATES THAT ILECS DO NOT FACE EFFECTIVE COMPETITION IN THE VAST MAJORITY OF SPECIAL ACCESS PRODUCT AND GEOGRAPHIC MARKETS

22. Below, we report the results of our market power analysis. In particular, we set forth the results of various analyses that we undertook to measure the presence of suppliers of special access services and to calculate their market shares for these services. All of these analyses resulted in the same finding, namely that, in the vast majority of special access product and geographic markets, the incumbent LECs do not face effective competition.

---

35 *Further Notice* ¶ 22.

36 *Wavecom Solutions Corporation, Transferor, and Hawaiian Telcom, Inc., Transferee, Applications for Consent to Transfer Control*, Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd 16081, ¶ 12 (2012). *See also, e.g., Qwest Forbearance Order* ¶ 64.

37 GAO Report at 19, 22.

23. We have attempted to perform our analyses for product and geographic markets that conform to markets that would be appropriate for a traditional market power analysis. However, in some cases, the manner in which the data were reported to the Commission made it necessary for us to report results for markets that are somewhat more aggregated than would be ideal. For that reason, the shares that we report below are for markets that we have been able to define using the data that the Commission has collected. For example, although we had originally intended to analyze separate markets for channel termination and channel mileage, we were unable to do so because of the nature of the data submitted to the Commission.[38] However, based on the fact that, *in all cases*, the more aggregated markets that we have examined are highly concentrated, it is unlikely that our finding would be different if we had analyzed markets that were more narrowly defined.

A. The Presence of Suppliers of Special Access Services

24. The Commission has concluded that information on the location where an end user customer is connected "is critical in determining how and where competition for special access services exists or is likely to develop."[39] It has further concluded that

---

[38] For a more complete discussion, the reader is referred to the Zarakas/Gately Declaration.

[39] *See Special Access for Price Cap Local Exchange Carriers*, Report and Order, 28 FCC Rcd 13189, ¶ 20 (2013). Note that some connections identified by the Commission may in fact be "idle" – *i.e.*, they are links to customer locations that have not been purchased. In such cases, the connections are sources of potential competition. According to the Commission's data request, "*Location* means a building, other man-made structure, a cell site on a building, a free-standing cell site, or a cell site on some other man-made structure where the *End User* is connected." *Special Access for Price Cap Local Exchange Carriers*, Order on Reconsideration, 29 FCC Rcd 10899, App. A, § 1 (2014) ("*2014 Order on Reconsideration*"). A *Location* is distinguished from a "*Node* [which] is an aggregation point, a branch point, or a point of interconnection on a *Provider*'s network, including a point of interconnection to other *Provider* networks." *Id.* Indeed, the data request makes clear that "a *Node* is not a *Location*." *Id.*

competition from providers that own facilities is necessary to discipline market prices. For example, in *Qwest*, the Commission specifically noted Qwest's failure to demonstrate actual or potential competition from competitors "that rely on their own last-mile connections to serve customers."[40] For this reason, we considered only facilities-based – or "owned" – connections in the analyses below.[41]

25. ***CLECs with Competing Facilities at Purchaser Locations.*** We begin by analyzing the number of CLECs that report facilities at a special access purchaser location.

Table 1
Percentage of CLEC Providers at Purchaser Locations[42]

ILEC Only	73%
ILEC and 1 CLEC	24%
ILEC and 2 CLECs	2%
ILEC and 3+ CLECs	1%

26. We find that approximately 73 percent of special access purchaser locations are served by a single ILEC with no other facilities-based supplier reported present. Locations where there are only two suppliers with special access facilities – an ILEC and a

40 *Qwest Forbearance Order* ¶ 87.

41 In all calculations reported in this Declaration, Indefeasible Right of Use ("IRU") facilities are treated as CLEC-owned and Unbundled Network Element ("UNE") and Unbundled Copper Loops ("UCL") facilities are treated as ILEC-owned.

42 *See* Zarakas/Gately Decl., Panel 5B. Purchasers are entities that buy a Dedicated Service in a price cap area and include "ILECs, [CLECs], cable system operators, wireless providers, satellite service providers, international service providers to and from points in the United States, interconnected and non-interconnected VoIP providers, and certain information service providers such as Internet access providers." *2014 Order on Reconsideration* at App. C.

competing carrier – account for about 24 percent of purchaser locations.[43] Thus, almost all purchaser locations, 97 percent, are served by only one or two suppliers. At only about 2 percent of all locations are there as many as three suppliers, and at about 1 percent are there four or more suppliers.

27. ***CLECs with Nearby Purchasers***. Even if one were to expand the geographic market to the census block level to account for potential competition, there still would be few areas in which there are four or more suppliers.

Table 2
Percentage of Census Blocks with ILECs and CLECs Providing Service[44]

ILEC Only	66.7%
CLEC Only	13.5%
ILEC and 1 CLEC	15.6%
ILEC and 2 CLECs	2.8%
ILEC and 3+ CLECs	1.3%

Note: Percentages do not sum to 100% because of rounding.

28. Specifically, the proportion of census blocks in which the ILEC is the only supplier is approximately 67 percent.[45] CLECS are the only supplier in fewer than 14 percent of census blocks. Similarly, approximately 16 percent of census blocks are served by an ILEC and a single CLEC and fewer than 3 percent of census blocks are served by an

[43] Calculations that report overall ILEC shares include data for all ILECs, not only those for which individual shares are reported.

[44] Zarakas/Gately Decl., Panels 4A & 4B.

[45] When the FCC data are organized by bandwidth, the ILECs are the only suppliers of bandwidth in approximately 72 percent of all census blocks in which they provide service. *See* Zarakas/Gately Decl., Table 6.

ILEC and two CLECs. Fewer than 2 percent of census blocks have four or more suppliers of special access services.

29. For purposes of this analysis, we conservatively treat all CLECs that offer service to a single location in a census block as serving the entire block. We note, however, that this approach is likely to overstate potential competition at many purchaser locations. The provision of service to some purchasers in a census block is not necessarily an indication that a competitor can serve all buildings in that census block, or even that the "potential competitor" provides the same special access service as the ILEC.

30. Moreover, use of the data compiled by the Commission from facility maps submitted by CLECs, which simply provide information about the census blocks in which a CLEC has fiber-optic facilities ("fiber"), similarly would be inappropriate for purposes of assessing potential competition. A CLEC may have installed fiber in a census block but may not be able to serve any locations therein because, for example, it may not operate an interconnection point within the census block. Moreover, a CLEC's network facilities often may be located at such a distance from the customer that the CLEC would be unable to recoup the costs of extending its network facilities from future sales.[46] Notably, we find that in fewer than 7 percent of the census blocks in which the

[46] The distance of a CLEC fiber node from a customer location would provide useful information about potential competition. For that reason, we will supplement our analysis by analyzing data on the proximity of customer locations to the facilities of competitive suppliers if the Commission decides to provide the data necessary to perform this analysis in this proceeding. Our current analysis overestimates potential competition because it assumes that a CLEC with customers anywhere in a census block is a potential competitor for any building in that census block.

FCC reports that at least one CLEC has fiber does any CLEC actually provide service to a purchaser.[47]

31. Collectively, the analyses outlined above demonstrate that, in the vast majority of purchaser locations and census blocks, there are fewer suppliers of special access service than are necessary for a fully competitive outcome. We base this conclusion on the observation that the presence of more than two suppliers is necessary to achieve a competitive outcome. We describe how the economic literature supports this conclusion below.[48] Both the Commission[49] and the Department of Justice[50] have indicated that at

---

47 The Commission reports CLEC fiber facilities in around 2.8 million census blocks, while we find that CLECs actually serve purchasers in around 193,500 census blocks. *See* Zarakas/Gately Decl., Table 8.

48 *See* discussion *infra* at ¶¶ 45-47.

49 *See, e.g.*, *Policies Regarding Mobile Spectrum Holdings, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, ¶ 1 (2014) ("Today, 92 percent of non-rural consumers, but only 37 percent of rural consumers, are covered by *at least four* 3G or 4G mobile wireless providers' networks. The policies that we adopt today aim to address this discrepancy and ensure that all Americans, regardless of whether they live in an urban, suburban, or rural area, can *enjoy the benefits that competition provides*.") (emphasis added); *Applications of AT&T Inc. and Centennial Communications Corp.; For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, Memorandum Opinion and Order, 24 FCC Rcd 13915, ¶ 76 (2009) ("After performing a market-by-market analysis, we find, in the great majority of the 27 markets identified by the initial screen, no competitive concerns requiring remedy. For instance, in most of these markets, there would be *four or more competitors* present post-transaction with thoroughly built-out networks and the ability to offer competitive services.") (emphasis added); *Application of AT&T Mobility Spectrum LLC and Consolidated Telephone Company for Consent to Assign Licenses*, Memorandum Opinion and Order, 30 FCC Rcd 9797, ¶ 19 (2015) ("We find that, notwithstanding the fact that AT&T would hold more than one-third of the below-1-GHz spectrum post-transaction in this local market, the likelihood of competitive harm is low when evaluating the particular factors ordinarily considered. The *three other nationwide service providers*, Sprint, T-Mobile, and Verizon Wireless, each have significant market shares in this rural market.") (emphasis added).

50 Complaint, *U.S. v. AT&T, Inc.*, No. 1:11-CV-01560, ¶ 41 (D.D.C. filed Aug. 31, 2011) ("In the national market for mobile wireless telecommunications services provided to enterprise and government customers, the proposed transaction effectively would reduce the number of significant competitors *from four to three*. . . . The reduction in the number of bidders for

least four suppliers are necessary for competition, and we generally have employed this threshold in discussing our results. Our conclusion, however, would be little changed if instead we had assumed that only three competitors were sufficient to achieve competitive outcomes. In more than 95 percent of census blocks in which special access service is supplied, fewer than three facilities-based providers had any special access purchasers, and there is little need to consider the competitiveness of a marketplace in which only two suppliers are present. As the Commission noted in *Qwest*, the assumption "that a duopoly always constitutes effective competition and is necessarily sufficient to ensure just, reasonable, and nondiscriminatory rates" is "inappropriate."[51] Moreover, fewer than three facilities-based providers supplied service at approximately 97 percent of purchaser locations.

B. Special Access Share Analysis

32. Although counts of the number of CLECs *that serve any purchasers* using their own facilities are better measures of competitiveness than are counts based on whether a CLEC has facilities in an area, they provide little information about the extent to which CLECs have *actually captured market share*. In particular, the fact that a CLEC serves

enterprise and government contracts *to three* . . . significantly increases the risk of anticompetitive effects.") (emphasis added); *Ex Parte* Submission of the United States Department of Justice, GN Docket No. 09-51, at 15 (Jan. 4, 2010) ("Based in large part on its extensive experience in evaluating horizontal mergers, the Department [of Justice] starts from the presumption that in highly concentrated markets consumers can be significantly harmed when the number of strong competitors declines from *four to three*, or three to two. This same experience teaches us that consumers can enjoy substantial benefits when the number of strong competitors rises from two to three, or *three to four*, especially if the additional competitor offers products based on a new and distinct technology.").

51 *Qwest Forbearance Order* ¶ 29.

at least one purchaser in a census block gives no indication of the magnitude of that CLEC's sales volumes and revenues within that area.

33. In attempting to measure competitiveness, we were able to assign a large percentage of special access purchasers to census blocks. This enabled us to calculate market shares based on the *quantities*, measured by total bandwidth, of special access services sold at the census block level.

34. We also were able to calculate revenue-based market shares for the areas comprised by the footprint (the total area in which the ILEC is the incumbent local carrier) of each of the major ILECs, both for all special access services sold and for individual special access services.[52] Within the footprint of a single ILEC, the presence of CLEC facilities varies greatly. Thus, these ILEC-footprint revenue-based shares are likely to overstate significantly the extent of competition in many smaller geographic areas.

35. In performing our calculations of both bandwidth-based and revenue-based market shares, we assigned to CLECs only the sales that were made using their own facilities.

36. ***Bandwidth-Based Concentration.*** For the analysis set forth below, we used data on the total bandwidth that was supplied to customer locations that could be determined.

---

[52] Because we found that a very large percentage of the carrier *billing* data that were collected by the Commission were missing usable purchaser location data, we were unable to calculate market shares based on *revenues* at the census block level. Although we believe that some of these data are for interoffice transport with no identifiable locations, the ILECs' "explanatory notes" indicate that the ILECs themselves do not know many purchaser locations. As a result, we do not know which missing locations to assign to transport and which to treat as unknown. For that reason, we are unable to calculate revenue-based market shares at a more granular geographic level at this time.

Table 3
Distribution of Firm Concentration (HHI) Based on Bandwidth Sold[53]

	Census Blocks in Which an ILEC Provides Special Access		All Census Blocks in Which Special Access Is Provided	
HHI	**Number**	**Percentage**	**Number**	**Percentage**
0-1500	0	0%	0	0%
1501-2500	65	0%	65	0%
2501-5000	3,666	1%	3,881	1%
5001-7500	20,835	5%	21,628	5%
7501-9999	43,800	11%	45,525	10%
9999-10000	320,855	82%	374,332	84%
Total	**389,221**		**445,431**	

37. We find that, in all census blocks where special access service is provided by an ILEC, the Herfindahl-Hirschman Index ("HHI") is 10,000 in around 82 percent of census blocks; between 7,500 and 10,000 in around 11 percent; between 5,000 and 7,500 in around 5 percent; and between 2,500 and 5,000 in less than 1 percent. Thus, the HHI exceeds 5,000 in approximately 99 percent of census blocks. Importantly, the Merger Guidelines characterize a market with an HHI above 2500 as "Highly Concentrated," and the HHIs in almost all (*i.e.*, more than 99 percent of) census blocks exceed this threshold, in most by a very substantial amount.[54]

[53] *See* Zarakas/Gately Decl., Panels 7A & 7B.

[54] U.S. Department of Justice and the Federal Trade Commission, *Horizontal Merger Guidelines*, ¶ 5.3 (Aug. 19, 2010), http://www.justice.gov/atr/horizontal-merger-guidelines-08192010.

38. Moreover, these measures of concentration change very little when one also takes into account census blocks in which CLECs are the only provider(s). Specifically, we find that, in all census blocks where special access service is provided by either a CLEC or an ILEC, the HHI is 10,000 in around 84 percent of census blocks; between 7,500 and 10,000 in around 10 percent; and between 5,000 and 7,500 in around 5 percent. Thus, the HHI exceeds 5,000 in over 99 percent of census blocks. Again, almost all (*i.e.*, more than 99 percent of) census blocks exceed the threshold for being deemed "Highly Concentrated."

39. ***Revenue-Based Shares.*** As noted, we calculated revenue-based shares at the "footprint" level for each of the major ILECs both for all special access services sold and for five bandwidth "buckets." This degree of aggregation was necessary due to the manner in which the data were supplied to the Commission and is likely to overestimate competition in many smaller geographic areas.

Table 4
ILEC Share of Special Access Revenues in Its Territory[55]

ILEC	Revenue Share
	***** BEGIN HIGHLY CONFIDENTIAL *****
[redacted]	
Weighted-Average ILEC Share	**73.6%**[56]
	***** END HIGHLY CONFIDENTIAL *****

40. These data show that the weighted-average ILEC share of revenues of all special access services combined is about 74 percent with a relatively small variation among carriers.[57] For example, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****

Table 5

55 *See* Zarakas/Gately Decl., Panel 3F. The revenues of an ILEC-owned CLEC entity that operates in that ILEC's footprint have been included in the ILEC's revenues. *See id.* ¶ 11(c).

56 As noted in the Zarakas/Gately Declaration, the calculation of the total ILEC revenue percentage included all CLEC circuits that could not be mapped to an ILEC footprint. As a result, the total ILEC share is less than the weighted average of the individual ILEC shares.

57 Note that a share of *****74 percent mplies an HHI no smaller than 5476 – that would be the case if there were a very large number of CLECs none of which had a significant market share – but the HHI in a "typical" market is almost certainly substantially higher.

ILEC Share of Special Access Revenues by Bandwidth[58]

Bandwidth	ILEC Share of Revenues
0-10 Mbps	82.4%
10-50 Mbps	79.9%
50-200 Mbps	62.4%
200-800 Mbps	68.4%
Above 800 Mbps	53.0%

41. When disaggregated into bandwidth "buckets," ILEC revenues account for about around 82 percent of special access revenues for 0-10 Mbps service, around 80 percent for 10-50 Mbps, around 62 percent for 50-200 Mbps, around 68 percent for 200-800 Mbps, and 53 percent for bandwidths greater than 800 Mbps. As discussed in somewhat more detail below,[59] the fact that CLECs have captured a portion of revenues from the provision of special access services should not be interpreted to mean that they act as a significant constraint on ILEC prices for those services.

42. As noted above, irrespective of the way in which special access services are assigned to antitrust markets, the same findings emerge: each of these services is supplied in markets that are highly concentrated and the ILECs generally face little or no competition in their provision of special access services. In particular, the data that we have analyzed support the following conclusions. First, in many areas, there are no providers with facilities that can provide special access services that compete with those

58 Zakaras/Gately Decl., Table 3.

59 *See* ¶ 48 *infra.*

of the ILEC.[60] Second, even in areas where CLEC providers have facilities, many have failed to acquire any special access purchasers.[61] Third, CLECs with purchasers of special access services tend to be few in number in many areas,[62] such that the competition faced by the ILECs is often not as intense as they claim.[63] Fourth, the ILECs still continue to capture a very large share of all special access service volumes in the great majority of census blocks, which is a further indication of the limited competition that they often face.[64]

V. THE ECONOMIC LITERATURE CONCLUDES THAT SEVERAL PROVIDERS ARE NEEDED TO CONSTRAIN PRICING

43. A substantial body of empirical evidence concludes that high firm concentration often leads to higher prices. The preponderance of this evidence suggests that markets with a small number of firms, or markets in which a few firms have very large market shares, tend to have higher prices than those in which concentration is lower. As we have shown above, in the case of special access, the ILEC is the only service provider in the

---

60 *See* ¶ 28 *supra* (showing that there is a single facilities-based supplier in the majority of census blocks).

61 *See* ¶ 30 *supra* (showing that there are no CLECs with customers in many census blocks where CLEC fiber is present).

62 *See* ¶ 28 *supra* (showing that, even in census blocks where CLECs have customers, they tend to be few in number).

63 *See, e.g.*, Letter from Keith M. Krom, AT&T General Attorney & Associate General Counsel, to Marlene H. Dortch, FCC Secretary, WC Docket No. 05-25,a t 2 (filed Oct. 13, 2015) (asserting that there are "many alternatives to price cap LEC offerings" and that "evidence abounds that special access competition has become even more intense"); Letter from Diane Griffin Holland and Patrick S. Brogan, USTelecom, to Marlene H. Dortch, FCC Secretary, WC Docket No. 05-25, at 2 (filed Sept. 24, 2015) (claiming that "the marketplace for special access and high-capacity services is robust and highly-competitive"); Letter from Curtis L. Groves, Verizon, to Marlene H. Dortch, FCC Secretary, WC Docket No. 05-25 (filed Sep. 24, 2015) (describing extensive competition from cable providers, CLECs, and fixed wireless providers).

64 *See* n.45 *supra*.

vast majority of building locations and there are no more than two facilities-based providers in the vast majority of significantly larger census block areas.

44. Schmalensee succinctly summarizes the results of this literature: "In cross-section comparisons involving markets in the same industry, seller concentration is positively related to the level of prices."[65] Similarly, Sutton observes that the idea that "a fall in concentration will lead to a fall in prices and price-cost margins is well supported both theoretically and empirically."[66] Pautler observes that "several studies of price/concentration relationships indicate that prices are higher where concentration is higher or the number of sellers is lower."[67] Finally, Coates and Hubbard note that "empirical studies of auction markets and various industries, such as airlines, railroads, books, and pharmaceuticals, show prices declining as the number of bidders or rivals increases and as concentration of sales in a few firms declines."[68]

45. With respect to the number of competitors that are needed to discipline pricing effectively, the economic literature generally supports a finding that many competitors are required and that each additional competitor's incremental effect on price diminishes as the number of competitors increases. For example, in food retailing, Lamm found

---

65 R. Schmalensee, "Inter-Industry Studies of Structure and Performance," *Handbook of Industrial Organization*, Vol. II, R. Schmalensee and R.D. Willig (Editors), Amsterdam: North-Holland, 1989, p. 988.

66 J. Sutton, "Market Structure: Theory and Evidence," in *Handbook of Industrial Organization*, Vol. III, M. Armstrong and R.H. Porter (editors), North-Holland, 2007, p. 2307.

67 P.A. Pautler, "Evidence on Mergers and Acquisitions," *The Antitrust Bulletin*, 2003, pp. 188-89.

68 J.C. Coates and R.G. Hubbard, "Competition in the Mutual Fund Industry: Evidence and Implications for Policy," John M. Olin Center for Law, Economics, and Business, Harvard University, Discussion Paper No. 592, August 2007, p.11.

that "it is clear that growth in the 3 largest firms' shares have a significant positive effect on prices," while "an increase in the market share of the *fourth largest firm* causes a reduction in food prices."[69] Similarly, in a recent analysis of the determinants of the sale prices of condominium apartments, Hungria-Gunnelin found that the "effect of the number of bidders . . . is strongly significant" – "starting at one bidder, the increase in price when adding one more bidder is 3.9 percent and the corresponding increase when going from five to six bidders is 1.9 percent."[70] Brannman, Klein and Weiss found "a systematic tendency for the winning bid to decline as the number of bidders [to underwrite tax exempt bonds] increases"[71] and that even the effect of adding an 8th bidder was statistically significant.[72]

46. Using a different approach, Geithman, Marvel, and Weiss attempted to identify a "critical" level of concentration, the level at which prices begin to increase in particular

---

69 R.M. Lamm, "Prices and Concentration in the Food Retailing Industry," *Journal of Industrial Economics*, 1981, p. 75 (emphasis added).

70 R. Hungria-Gunnelin, "Impact of Number of Bidders on Sale Price of Auctioned Condominium Apartments in Stockholm," *International Real Estate Review*, Vol. 16, No. 3, pp. 274-95.

71 L. Brannman, J.D. Klein, and L.W. Weiss, "The Price of Effects of Increased Competition in Auction Markets," *Review of Economics and Statistics*, 1987, p. 27.

72 *Id.* at Table 1. Note, however, that Kwoka found that, although more than two competitors were needed in a market to effectively discipline pricing, "[l]arge market shares for the two leading firms seem most decisive for industry price-cost margins, with a depressing effect from a sufficiently large third share." J.E. Kwoka, "The Effect of Market Share Distribution on Industry Performance," *The Review of Economics and Statistics*, 1979, p. 108. This result suggests that there may be circumstances in which the presence of a strong third firm may lead to lower prices and that the presence of additional firms beyond the three largest may have little or no effect. However, Mueller and Greer, who re-analyzed Kwoka's data, found that "the fourth firm as well as groups of firms below the top two possess characteristics similar to that of the third firm." W.F. Mueller and D.F. Greer, "The Effect of Market Share Distribution on Industry Performance: Re-Examined," *The Review of Economics and Statistics*, 1984, p. 357. That is, they found that the presence of additional firms beyond the three largest may lead to lower prices.

industries.[73] In gasoline retailing, they found a critical two-firm concentration ratio of about 35 percent and a critical four-firm ratio of about 50 percent[74] and in general obligation bond underwriting they found a critical four-firm concentration ratio of about 50 percent.[75]

47. These studies all support the unsurprising conclusion that multiple providers are needed to ensure that a competitive outcome is achieved. While the exact number may be different in different industries, based on their different cost and demand characteristics, it is likely that four – and certainly more than two – providers are needed to give a competitive outcome in the special access markets under consideration in this proceeding. Under any of the approaches described above, the critical thresholds are not satisfied in almost all of the special access markets that we have analyzed. As detailed herein, in the great majority of instances, the number of CLECs – whether measured by the number providing special access service at a purchaser location or the number having special access purchasers in a census block – generally falls short of the number that is usually required to achieve the lowest prices in a market. Similarly, the market shares of the ILECs – whether measured by their shares of special access capacity sold in a census block or their shares of special access revenues in their respective footprints – generally far exceed the levels at which large firms are able to raise prices above competitive levels. On the basis of this evidence, it is reasonable for the Commission to

---

73 F.E. Geithman, H.P. Marvel, and L.W. Weiss, "Concentration, Price, and Critical Concentration Ratios," *Review of Economics and Statistics*, 1981.

74 *Id.* at 349-52. The four-firm concentration ratio is the proportion of total industry sales accounted for by the four largest firms and the two-firm concentration ratio is the proportion accounted for by the two largest firms.

75 *Id.* at 348.

conclude that the structures of most special access product and geographic markets are unlikely to result in the prices that would prevail in a competitive marketplace.

48. We further note that our findings are not affected significantly by the fact that CLECs have captured some purchasers of special access services. This is so for several reasons. First, at almost all purchaser locations that are served by an ILEC there are very few CLECs with competing facilities and the number is still very small if one counts CLECs with customers in the same census block as the ILEC. Moreover, the facilities of many of these "nearby" CLECs are likely to be at some distance from, and require costly extensions to serve, the locations of many purchasers. As a result, a purchaser faced with an ILEC price increase may have few if any alternatives to which to turn. Second, CLECs may not be able to provide services that are comparable to those of the ILEC in many of these areas and, even if they could, they may face significant difficulties in expanding their capacity to do so. As a result, CLECs may be limited in their ability to absorb customers who wish to shift their special access purchases from an ILEC. Finally, terms and conditions in ILEC contracts impede customers from shifting more than a small portion of their purchases to a CLEC without experiencing a substantial increase in the costs of their remaining purchases. For all of these reasons, it is unlikely that the elasticity of demand faced by an ILEC is so high that it severely limits the ILEC's ability to raise prices.

ATTACHMENT C

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

DECLARATION OF WILLIAM P. ZARAKAS AND SUSAN M. GATELY

January 27, 2016

Table of Contents

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

DECLARATION OF
WILLIAM P. ZARAKAS AND SUSAN M. GATELY

I. QUALIFICATIONS

1. **William P. Zarakas.** My name is William P. Zarakas. I am a Principal with The Brattle Group, an economics consulting firm, where I work primarily on economic and regulatory matters concerning the communications and energy industries. I have been involved in the economic analysis of issues facing these industries for roughly 30 years. I have provided reports and/or testimony before the Federal Communications Commission (FCC), the Federal Energy Regulatory Commission (FERC), the Securities and Exchange Commission (SEC), the Copyright Royalty Judges (Library of Congress), the U.S. Congress, state regulatory agencies, arbitration panels, foreign governments and courts of law. I have previously provided testimony to the FCC on a range of issues and proceedings, including market share and churn analyses, cost models, foreclosure and bargaining models, and pole attachments matters. My CV is attached as Appendix A.

2. **Susan M. Gately.** My name is Susan M. Gately. I am President of SMGately Consulting, LLC (SMGC), 84 Littles Avenue, Pembroke, MA 02359. SMGC is a consulting firm specializing in telecommunications, economics, and public policy. I have participated in numerous proceedings before the FCC dating back to 1981 and have appeared as an expert witness in state proceedings before state public utility commissions. My CV is attached as Appendix B.

II. ASSIGNMENT

3. We have been asked by counsel to Sprint Corporation to review and analyze the special access data that were collected by the FCC under its *Data Collection Order on*

Reconsideration[1] and provided in a series of files included in the NORC data enclave. In this Declaration, we calculate incumbent local exchange carrier ("ILEC") and competitive local exchange carrier ("CLEC") shares of various special access markets and explain how we used the enclave data in our calculations.

III. INTRODUCTION

4. This Declaration contains the results of market share and market concentration analyses designed to be both illustrative of the competitive conditions extant in the market for special access service and to serve as components of a traditional market power analysis. Taken together, the results demonstrate a market where competitive alternatives are unavailable to purchasers of special access services at the vast preponderance of locations (both buildings and cell towers) or elsewhere in the census blocks in which buildings or cell towers with special access demand are located. Moreover, the data reveal that all of the ILECs continue to be the primary sellers of services within their respective footprints.

5. In this Declaration, we discuss details on the development of the datasets used for the market share and market concentration analyses, the rationale behind any adjustments made to the raw data filed by the respondents to the data request, and the results of the analysis. We provide tables (referenced throughout this Declaration) detailing the results of the analyses in Appendix C.

6. We considered the guidance provided in the Besen/Mitchell Declaration concerning the specification of relevant product and geographic markets for special access in developing

---

[1] *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order on Reconsideration, 29 FCC Rcd. 11,657 (2014) ("*Data Collection Order on Reconsideration*").

the datasets used in our analysis. Our review and analysis of the data provided by the FCC in the NORC data enclave indicated that it is possible to compile meaningful datasets on special access services segmented by bandwidth and census block, but it is currently not feasible to further segment the special access data by billing code attributes such as channel termination and channel mileage.

IV. DEVELOPMENT OF DATASET

7. The analysis in this Declaration has been conducted on data filed by providers of special access services—the CLEC [2] provider responses to Questions II.A.1 through II.A.19 and ILEC provider responses to Questions II.B.1 through II.B.13 included in the FCC's *Data Collection Order*. More specifically, the analysis was premised on:

    a. Data on locations served reported in files II.A.3, II.A.4, II.B.2, and II.B.3 (hereinafter the "Location Files"), and

    b. Data on prices reported in files II.A.12 and II.B.4 (hereinafter the "Pricing Files").

8. Market share analyses were conducted at the most granular level possible, constrained only by limitations in the primary data. As indicated above, we broke special access services into distinct product categories for purposes of this analysis. With respect to geographic markets, our analyses were conducted at the location level, census block level, ILEC footprint level, and national level.

9. Our objective was to apply the most comprehensive datasets possible in answering questions concerning market shares. Accordingly, we used three datasets in our analyses,

---

[2] We purposely use the term CLEC throughout this Declaration rather than the broader "competitive provider" term defined in the *Data Collection Order*. By design, our analysis attempts to focus upon the services offered by access service providers and access services.

each covering the largest number of observations possible for that analysis. Dataset 1 is comprised of total revenues for facilities-based services (as described below) for both ILECs and CLECs. Dataset 2 is comprised of counts of competitors by locations where they provided facilities-based services, both at the census block and location level using data derived from the ILEC and CLEC Location Files. Dataset 3 is comprised of geocoded circuit counts and bandwidth for circuits provisioned using the carriers own facilities.

10. We used the raw data files in the NORC data enclave, responses to the II.A and II.B series of questions, and various FCC-provided crosswalk files and other analyses made available to parties in this proceeding in developing our datasets. We provide a more detailed discussion of the derivation of the three datasets used in our analyses below, and summarize dataset composition and derivation in **Table 1**.

11. Dataset 1 is used primarily as the basis for calculating revenue-based market shares for carriers providing special access services over their own facilities (the results of which are provided in Table 3 and discussed later in this Declaration). As is shown in Table 1, we made minor adjustments to the raw Pricing Files data, which we discuss in work steps (a) through (d) below. The circuit count and associated revenues reported by the respondents, which served as the starting point for our analysis, are shown on the line entitled "Raw Pricing File" Data in Table 1. The specific adjustments made to these data are also shown in the table, and the resulting Dataset 1 is displayed in the line entitled "Dataset 1 – Adjusted Revenue Data." The steps involved in deriving Dataset 1 follow:

    a. We deducted circuit counts and associated revenues for special access services that were not provided over the reporting carrier's own facilities. Specifically, we

used the fields included in the Location Files (Table II.A.4) for Unbundled Network Elements (UNEs) and Unbundled Common Loops (UCLs) to "tag" circuits that were leased, and then excluded services provided over such leased facilities from Dataset 1.[3]

b. We assigned all of the ILEC circuits to their own footprints. We used location data to assign facilities-based CLEC special access circuits to an ILEC footprint, by using the FCC-provided "IIA_WireCenter_xWalk" in conjunction with Table II.A.8. ILEC circuits that do not have accompanying location IDs were assumed to be located in their own footprints. On the other hand, CLEC circuits that could not be mapped to an ILEC footprint due to missing location IDs or other reasons (but were facilities-based special access circuits) were assigned to a "Missing Footprint" category and included in Dataset 1.

c. We re-assigned certain circuits identified as CLEC circuits to the ILEC category. Specifically, we re-categorized circuits provided by CLEC affiliates of ILECs that were located in the footprint of their ILEC owner as ILEC circuits. As in the previous step, we completed this work step using the FCC-provided "IIA_WireCenter_xWalk" in conjunction with Table II.A.8. We retained the CLEC classification for circuits that were provided by the CLEC affiliate of an ILEC that were located outside of that ILEC's footprint.

d. The final step in completing Dataset 1 involved aggregating revenues across billing codes and months for each of the roughly 6.9 million facilities-based

---

[3] As illustrated in Table 1, locations identified as "leased" were then excluded from all three datasets used to develop market shares and market concentration metrics for facilities-based services, facilities-based bandwidth sold, and billed revenues for facilities-based services.

circuits over which special access services were provided to an active customer. The ILEC, CLEC, and total revenues shown in Table 1 are the sum of reported monthly circuit-level revenues (for all billing codes).

12. Dataset 2 comprises location observations corresponding to facilities-based circuits in terms of location coordinates (longitude/latitude), unique buildings or cell towers, and census blocks, and was derived from the ILEC and CLEC Location Files. This dataset was used primarily to analyze the presence and number of providers of special access by census blocks and locations (the results of which are provided in Tables 4 and 5 and discussed later in this Declaration). Accordingly, assignment of circuit locations to ILEC footprints and census blocks was important in completing this analysis. We used the raw Location File data as a starting point for this dataset, and adjusted these data downward for those circuits that are reported as being leased and those with location data insufficient to be mapped to a census block. The specific adjustments made to these data are also shown in Table 1, and the resulting Dataset 2 is displayed in the line entitled "Dataset 2 – Adjusted Location Files." The steps involved in deriving Dataset 1 are shown in (e) and (f) below.

    e. As shown in Table 1, the number of locations in the raw Location Files was roughly 1.8 million. We mapped each location to a geocode using the combination of location information included in the Location Files, the FCC's geocoding cross-walk files (CLECLocations_Geocoded.txt and ILECLocations_Geocoded.txt), and ArcGIS software. Approximately 7 percent

(123,213) of locations could not be assigned geocodes.[4] The total number of locations included in Dataset 2 is roughly 1.3 million locations, located in 581,704 unique census blocks.[5]

f. We undertook a further step in the geocoding process to identify unique location addresses. We assigned each geocoded location to a building or cell tower. Location coordinates (longitude and latitude) that were (a) within the same census block and (b) within 10 meters of each other,[6] were assigned geocoded locations to the same building or cell tower. Thus, the number of total locations in Dataset 2—1.3 million—is greater than the calculated number of unique buildings or cell towers shown in Table 1: 843,184.[7]

13. Dataset 3 is comprised of circuit counts based on the presence of facilities and bandwidth at the census block level, and is also derived from the ILEC and CLEC Pricing Files and Location Files. Dataset 3 was used to calculate bandwidth-based market shares for

---

[4] The adjustments to the raw Location Files shown in Table 1 also include the exclusion of 335,488 locations at which special access was not facilities-based.

[5] It is worth noting that our independently developed census block and building/tower counts are quite similar to those developed by the FCC and released as "Building XWalks" with the January 15, 2016 update to the NORC data enclave.

[6] Locations that were sequentially within 10 meters of each other were also determined to be in the same building or at the same tower. For example, suppose locations A, B, and C are all in the same census block, that A is 7 meters from B and C is 5 meters from B and 12 meters from A. In this instance, all three locations would be coded to be in the same building. This may slightly overstate what locations are in the same building and, as a result, overstate the percentage of total buildings/towers with a competitive presence. The FCC performed a similar analysis that resulted in the creation of the "Building XWalks" described in the footnote above using a larger 50-meter screen.

[7] The differential between the raw location count and the number of unique building/tower locations referenced here is driven by the occurrence of duplicate location entries in the Location Files of some carriers and the fact that a subset of the locations is served by more than one facilities-based provider.

special access. Such calculation requires that all circuit observations include associated bandwidth and location data sufficient to map it to a census block. The specific adjustments made to these data are also shown in Table 1 and the resulting Dataset 3 is displayed in the line entitled "Dataset 3 – Geocoded Pricing Data." The steps involved in deriving Dataset 3 are shown in steps (g) through (j) below.

g. We merged Pricing Files and Location Files for purposes of mapping individual circuits to census blocks. The derivation of Dataset 3 started with the line "Dataset 1 – Adjusted Revenue Data," which excluded circuits that were leased and re-assigned certain circuits reported by CLEC affiliates of ILECs.

h. We excluded circuits that could not be mapped to census blocks, either due to missing location IDs or other reasons.[8]

i. We also excluded a very small number of circuits for which circuit bandwidth was unspecified in the Pricing Files (*i.e.*, in cases for which the bandwidth designation was "0" or "0.01").

j. We adopted a general assumption concerning bandwidth for circuits that were designated to be greater than 1 Gbps but for which specific bandwidth was not provided (*i.e.*, in cases for which the bandwidth designation was "-99999").

14. Table 1 indicates that the resulting Dataset 3 comprises approximately 4.4 million circuits and 445,431 census blocks, as shown in Table 1.

---

[8] Roughly 30 percent of the total circuits included in the raw dataset did not contain a valid location ID. As a result, we excluded 1,682,499 ILEC circuits and 397,443 CLEC circuits from Dataset 3.

V. MARKET SHARE AND MARKET CONCENTRATION ANALYSES AND RESULTS

15. As shown in Table 1, the combined raw ILEC and CLEC Pricing Files yielded revenues equal to $32 billion realized on sales associated with approximately 7.2 million special access circuits.[9] Table 1 also summarizes the adjustments made to the raw Pricing Files—*i.e.*, exclusions for leased circuits and re-classification of certain CLEC circuits (as described above). This resulted in Dataset 1 comprising revenues equal to roughly $30.9 billion realized on sales associated with roughly 6.9 million special access circuits. Of these, ILEC billings account for approximately $22.7 billion (or about 74 percent) of all billing for facilities-based special access services.

16. **Table 2** displays the count of circuits by bandwidth category regardless of technology. In Table 2, we segmented all special access services, regardless of technology, into five categories by bandwidth (or "speed buckets"): (1) less than or equal to 10 Mbps; (2) greater than 10 Mbps and less than or equal to 50 Mbps; (3) greater than 50 Mbps and less than or equal to 200 Mbps; (4) greater than 200 Mbps and less than or equal to 800 Mbps; and (5) greater than 800 Mbps. These bandwidth categories differ from the Service Type fields included in Table II.B.8 and II.B.9 in two primary regards.[10] First,

---

[9] Each circuit observation is a unique combination of the reported filer, location, customer, circuit ID, circuit type, and bandwidth. The Pricing Files provided separate observations for the combination of circuits and billings codes on a monthly basis. For example, the circuit observations for a customer that received channel termination and mileage (two separate billing codes) for, say, a single DS1 circuit for each month in the year would equal 24 (*i.e.*, 2 billing codes x 12 months). We collapsed monthly data and billing codes for a single circuit into a single observation in developing the number of circuits and associated revenue data that we used in calculating ILEC and CLEC revenue-based market shares.

[10] The record format in Table II.B.8 (CBDS Revenues) for the Service_Type field was: DS1; DS3; and Other CBDS. The record format for Table II.B.9 (PBDS Revenues) for the Service_Type field was: A for bandwidth less than or equal to 1.5 Mbps; B for bandwidth

we selected bands that spanned the full range of bandwidth potential between DS1 level circuits and 1 Gbps circuits. Second, we selected a band of greater than 800 Mbps (instead of two bands, one equal to a broad range of 100 Mbps to 1,000 Mbps and another set to greater than 1,000 Mbps) in order to capture the market for high speed circuits, Ethernet or otherwise. We viewed these bandwidth categories as complementary to the bandwidth categories in Tables II.B.8 and II.B.9. The bandwidth (speed) field in each circuit record in the Pricing Files[11] allowed the reported circuits to be segmented by bandwidth category regardless of technology.

17. Table 2 indicates that the ILECs were the sellers of special access services for roughly 5.6 million circuits out of the roughly 6.9 million (around 82 percent) special access circuits included in Dataset 1. Table 2 also indicates that the ILECs' special access circuits with speeds of 10 Mbps or less accounted for 86.7 percent of all special access circuits in this bandwidth bucket. The table also indicates that circuits with speeds of 10 Mbps or less accounted for 74.8 percent of all special access circuits. All circuits up to 50 Mbps (*i.e.*, circuits with speeds of 10 Mbps or less and circuits greater than 10 Mbps and less than or equal to 50 Mbps) accounted for over 88 percent of all special access circuits, with ILEC circuits accounting for over 85 percent of those circuits.

18. The bandwidth field in each circuit record in the Pricing Files also allowed the revenue-based market shares to be segmented by bandwidth category regardless of technology, which we show in **Table 3**. The analysis summarized in the table indicates that ILEC

---

greater than 1.5 Mbps but less than or equal to 50 Mbps; C for bandwidth greater than 50 Mbps but less than or equal to 100 Mbps; D for bandwidth greater than 100 Mbps but less than or equal to 1 Gbps; and E for bandwidth greater than 1 Gbps.

[11] The ILEC and CLEC Pricing Files included the following fields: DSN_BANDWIDTH, OTHERCBDS_BANDWIDTH, and PBDS_BANDWIDTH.

revenue-based market shares were highest for lower bandwidth circuits (82.4 percent for special access circuits with speeds of 10 Mbps or less). The table also indicates that the ILECs also had the majority of higher speed circuits (68.4 percent for circuits with speeds between 200 and 800 Mbps, and 53 percent for circuits with speeds above 800 Mbps). Circuits greater than 200 Mbps (*i.e.*, circuits with speeds greater than or equal to 200 Mbps and less than or equal to 800 Mbps, and greater than 800 Mbps) account for fewer than 7 percent of all special access circuits.

19. We developed locational analyses using Dataset 2, which we used to develop the distribution of special access providers by census block. This analysis indicated that facilities-based special access services were provided in 581,704 census blocks. Of these, the ILECs reported that they provided special access in 503,324 census blocks, and CLECs reported providing facilities-based special access services in 193,561 census blocks. The results of this analysis are summarized in **Table 4**.

20. Table 4 also indicates that an ILEC was the sole provider of special access services in 388,143 (or about 66.7 percent) of the total 581,704 census blocks included in the dataset. Alternatively, the ILECs were the sole providers of special access services in 388,143 (or about 77 percent) of the 503,324 census blocks where they have indicated that they are currently selling special access service.

21. In addition, Table 4 shows that ILECs and CLECs both have reported selling special access service over their own facilities in 115,181 census blocks. As is shown in Panel 4B, in the vast majority of these cases, special access presence was limited to an ILEC and a single CLEC (90,916 out of 115,181 census blocks, or about 79 percent).

22. The location data included in Dataset 2 were also used to derive the number of providers reporting special access by building or cell tower location. **Table 5** indicates that an ILEC was the sole provider in 612,514 (73 percent) of the 843,184 identified building or cell tower locations. It also shows that no more than two providers have a special access presence in nearly 90 percent (205,690 out of 230,670) of the remaining building or cell tower locations.

23. We calculated bandwidth shares, in addition to the revenue-based shares (using Dataset 1) and the locational analysis (using Dataset 2). We used Dataset 3 to calculate bandwidth-based market shares, with bandwidth share defined as the sum of bandwidth provided by each special access carrier within a census block divided by the total special access bandwidth sold within the census block.[12] Bandwidth shares are calculated to be 100 percent in census blocks where only one carrier (either an ILEC or a CLEC) report special access sales over their own facilities. In census blocks where facilities-based special access was sold by more than one carrier, bandwidth shares for each carrier are less than 100 percent.

24. **Table 6** shows: (i) the number of census blocks where an ILEC was the sole provider of special access, and had a 100 percent bandwidth, and (ii) the number of census blocks where a CLEC was the sole provider of special access using their own facilities, and had a 100 percent bandwidth share.

---

[12] For example, if in a defined geographic market (*i.e.*, a census block), an ILEC provides 300 Mbps of special access services, CLEC A provides 100 Mbps of service, and CLEC B provides 200 Mbps of service, then the sum of bandwidth in the geographic market equals 600 Mbps and the ILEC's share of the market is equal to 50 percent, while CLEC A's share is equal to 16.7 percent and CLEC B's share is equal to 33.3 percent.

25. As indicated earlier when we described the development of Dataset 3, all observations in the dataset must have accompanying circuit bandwidths and location data in order to calculate bandwidth shares for each carrier by census block. Accordingly, Dataset 3 includes—and the bandwidth shares are based on—fewer circuit observations than Dataset 1 and fewer census block observations than Dataset 2.[13]

26. Table 6 demonstrates the bandwidth share analysis for all 445,431 census blocks included in Dataset 3. The table indicates that an ILEC had 100 percent bandwidth share (*i.e.*, it was the sole provider of facilities-based special access services) in 320,801 out of 445,431 (72 percent) of the census blocks in the dataset. Alternatively, an ILEC had a 100 percent bandwidth share in 320,801 out of 389,221 (82 percent) of the census blocks in which it had an active special access customer.

27. We also used the bandwidth shares to calculate Herfindahl-Hirschman Indexes (HHIs) for each census block. The HHI for the vast majority of census blocks where special access was sold (over a carrier's own facilities) was 10,000, because there was only a single provider of special access service. In **Table 7**, we demonstrated the distribution of HHIs across: (a) census blocks where ILECs provided special access (Panel 7A), and (b) across all census blocks where carriers reported selling special access over their own facilities (Panel 7B). The panels in Table 7 indicate that less than 1 percent of census blocks have HHIs that are 5,000 or less either when looking at only census blocks where ILECs sell special access services or at all census blocks where carriers reported selling facilities-based special access. Eighty-four percent of census blocks where carriers

[13] Dataset 1 includes roughly 6.9 million facilities-based circuits, while Dataset 3 includes roughly 4.4 million such circuits. Dataset 2 includes 581,704 census blocks in which carriers sell facilities-based special access, while Dataset 3 includes 445,431 such census blocks.

(ILECs and CLECs) reported selling special access have HHIs of 10,000, as do 82.4 percent of census blocks where ILECs provided special access.

28. Finally, we used the CLEC location data in Dataset 2 (which was the basis for the breakdown of facilities-based special access services in Table 4)[14] to compare: (i) the census blocks in which CLECs deployed fiber facilities, with (ii) the extent to which CLECs reported providing special access over their own facilities. As shown in **Table 8**, CLECs reported having fiber facilities in over 2.8 million census blocks.[15] However, CLECs provided facilities-based special access in a very small subset of these census blocks (193,561 census blocks). The table also indicates that three or more CLECs provided special access over their own facilities in only 8,163 census blocks. This is a small fraction of the 581,704 census blocks included in Dataset 2 and a still smaller fraction of the roughly 2.8 million census blocks where CLECs have reported deploying fiber facilities.

---

[14] Specifically, Table II.A.4 as adjusted as described earlier in this Declaration.

[15] Census blocks in which CLECs have a fiber presence were derived from the CensusBlocksWithFiber.txt.

Table 1
Derivation of Share Analysis Data Sets

	Circuit Counts			Revenues			Location Counts		
Step	ILEC	CLEC	Total	ILEC	CLEC	Total	Filer-Locations	Census Blocks	Building/Cell Towers
Raw Pricing File Data	**5,522,279**	**1,696,130**	**7,218,409**	**$22,018,669,551**	**$9,995,508,618**	**$32,014,178,169**	-	-	-
Adjustments									
Less CLEC circuits that are leased (reported UNE and UCL suppliers)	0	-364,727	-364,727	$0	-$1,124,989,128	-$1,124,989,128	-	-	-
Recategorizes CLECs operating in their ILEC's Footprint as ILECs	65,745	-65,745	0	$706,894,515	-$706,894,515	$0	-	-	-
Dataset 1 - Adjusted Revenue Data	**5,588,024**	**1,265,658**	**6,853,682**	**$22,725,564,066**	**$8,163,624,975**	**$30,889,189,040**	-	-	-
Raw Location File Data							**1,804,369**		
Less locations with facilities that are leased (reported UNE and UCL suppliers)	-	-	-	-	-	-	-335,488		
Less locations that cannot be mapped to a census block	-	-	-	-	-	-	-123,213		
Dataset 2 - Adjusted Location Files	-	-	-	-	-	-	**1,345,668**	**581,704**	**843,184**
Geocoded Pricing Files									
Less circuits that are missing a location ID	-1,682,499	-397,443	-2,079,942	-$6,382,509,630	-$2,149,316,379	-$8,531,826,009			
Less circuits that cannot be mapped to a census block	-339,012	-13,928	-352,940	-$3,165,860,876	-$142,157,209	-$3,308,018,085			
Less circuits with unknown bandwidths (reported as 0 or 0.01)	-13,700	-9,350	-23,050	-$421,316,792	-$144,376,182	-$565,692,973			
Dataset 3 - Geocoded Pricing Data	**3,552,813**	**844,937**	**4,397,750**	**$12,755,876,769**	**$5,727,775,205**	**$18,483,651,973**	**894,068**	**445,431**	**625,191**

Sources and Notes:

- Raw Pricing File Data refer to Table II.B.4 part 1 and Table II.A.12 part 1.
- Raw Location File Data refer to Table II.B.3 and Table II.A.4.
- Table II.B.4 part 1 includes 85.2 million pricing records. Table II.A.12 part 1 includes 18.9 million pricing records. Each circuit observation is a unique combination of the filer, location, customer, circuit ID, circuit type, and bandwidth.

Table 2
Count of Circuits by Bandwidth Bucket

	Bandwidth Bucket (Mbps)					
Filer	0-10	10-50	50-200	200-800	800+	Total
[redacted]						
Total ILECs	4,440,315	710,984	223,285	31,704	181,736	5,588,024
% Total	*86.7%*	*77.6%*	*59.0%*	*59.5%*	*47.5%*	*81.5%*
CLECs	683,426	205,110	154,992	21,564	200,566	1,265,658
% Total	*13.3%*	*22.4%*	*41.0%*	*40.5%*	*52.5%*	*18.5%*
Total	**5,123,741**	**916,094**	**378,277**	**53,268**	**382,302**	**6,853,682**
% Grand Total	***74.8%***	***13.4%***	***5.5%***	***0.8%***	***5.6%***	***100.0%***

Sources and Notes:

-Circuit observations are from Table II.B.4 part 1 and Table II.A.12 part 1.

-Each circuit observation is a unique combination of the filer, location, customer, circuit ID, circuit type, and bandwidth.

-Circuit count includes facilities-based special access circuits only; CLEC circuits that were reported as UNE or UCL (based on designations in the CLEC Location file Table II.A.4) were excluded.

Table 3
Revenue-Based Market Share Analysis
Facilities-Based Special Access - By Service Bandwidth

Panel 3A: (0 – 10 Mbps)

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 10,001,613,340	$ 2,139,303,640	$ 12,140,916,979	82.4%	17.6%

Panel 3B: (10 – 50 Mbps)

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 6,439,731,542	$ 1,619,517,798	$ 8,059,249,340	79.9%	20.1%

Panel 3C: (50 – 200 Mbps)

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 2,611,490,975	$ 1,571,482,275	$ 4,182,973,250	62.4%	37.6%

Table 3 (cont'd)
Revenue Based Market Share Analysis
Owned Special Access - By Service Bandwidth

Panel 3D: (200 – 800 Mbps)

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 985,980,506	$ 455,429,500	$ 1,441,410,006	68.4%	31.6%

Panel 3E: (800+ Mbps)

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 2,686,747,703	$ 2,377,891,761	$ 5,064,639,465	53.0%	47.0%

Panel 3F: Total

ILEC Service Area		ILEC Revenues	CLEC Revenues	Total Revenues	ILEC Market Share	CLEC Market Share
[redacted]						
Total	[8]	$ 22,725,564,066	$ 8,163,624,975	$ 30,889,189,040	73.6%	26.4%

Sources and Notes:
-ILEC revenues are from Table II.B.4 part 1 and CLEC revenues are from Table II.A.12 part 1.
-We excluded the following circuits and associated revenue from this table: 364,727 CLEC circuits that were not facilities-based (roughly $1.1 billion).
-Also, we re-categorized 65,745 CLEC circuits to ILEC circuits. These circuits are reported as CLECs owned by an ILEC and are located within that ILEC's service area.
[6]: Includes ILECs other than the top five ILECs reported in lines [1] through [5], which includes 14 other ILECs.
[7]: Are the revenues reported by CLECs but which could not be mapped to an ILEC footprint because of insufficient location data.

Table 4
Facilities-Based Special Access
Provider Presence - By Census Block

Panel 4A: Breakdown of All Census Blocks with Special Access Service

ILEC Service Area		Census Blocks Where Special Access Sales Are Reported: Total [a]	ILECs [b]	CLECs [c]	ILECs + CLECs [d]	ILECs + CLECs (%) [e] = [d]/[a]	Only ILECs [f]	Only ILECs (%) [g] = [f]/[a]
[redacted]								
Total ILECs (Including Other ILECs)	[6]	**581,704**	**503,324**	**193,561**	**115,181**	**19.8%**	**388,143**	**66.7%**

Panel 4B: Breakdown of Census Blocks With ILEC and CLEC Presence

ILEC Service Area		Census Blocks Served By ILECs + CLECs [a]	Number of CLECs Providing Special Access: 1 [b]	1 [c] = [b]/[a]	2 [d]	2 [e] = [d]/[a]	3+ [f]	3+ [g] = [f]/[a]
[redacted]								
Total ILECs (Including Other ILECs)	[6]	**115,181**	**90,916**	**78.9%**	**16,412**	**14.2%**	**7,853**	**6.8%**

Sources and Notes

For Panel A:

-The locations where ILECs and CLECs provide special access are provided in Table II.B.3 (ILECs) and Table II.A.4 (CLECs). Total locations, designated by a combination of the location IDs (assigned by providers) and FRN equal roughly 1.8 million. We then excluded locations at which CLECs circuits are reported as UNEs or UCLs (i.e., are not facilities-based) and/or could not be geocoded. The number of facilities-based special access locations included in the analysis equals roughly 1.35 million.

- We geocoded locations using ArcGIS (based on reported longitudes and latitudes for each location) in order to assign locations to census blocks. (As indicated above, locations which could not be assigned to a census block were excluded.)

[a]: Census blocks shown (581,704) reflect all facilities-based locations where special access service is provided and could be assigned to a census block.

[b]: Includes all census blocks where ILECs provide special access service based on Table II.B.3. When a CLEC affiliated with an ILEC reported a location in Table II.A.4 within its ILEC owner's footprint, we re-categorized the CLEC location as an ILEC location in that footprint.

[c]: Includes all census blocks where CLECs provide special access service based on Table II.A.4; excludes CLEC locations that were re-categorized as ILEC locations as described in the note to [b] above.

[6]: The Total line includes the impact of Other ILECs. For columns [a], [b], [c], [d], and [f], the difference between the Total line and the sum of the top five ILECs can be attributed to Other ILECs. However, based on the location data reported, ILECs overlap with each other in some census blocks.

For Panel B:

Panel B uses the same sources and methodology used in Panel A to further break down the census blocks included in 4A, column [d] – census blocks where both ILECs and CLECs have reported sales of special access over their own facilities.

Table 5
Facilities-Based Special Access
Distribution of Provider Presence – By Location (Building/Cell Tower)

Panel 5A: Frequency

ILEC Service Area		Total Number of Buildings Or Cell Towers	Number CLEC Providers In Building / Tower 0	1	2	3+
[redacted]						
Total ILECs	[7]	834,814	612,514	198,332	18,728	5,240
CLECs (Missing Footprint)	[8]	8,370	0	7,358	910	102
Total	[9]	**843,184**	**612,514**	**205,690**	**19,638**	**5,342**

Panel 5B: Percentage Breakdown

ILEC Service Area		Number CLEC Providers In Building / Tower 0	1	2	3+
[redacted]					
Total ILECs	[7]	73%	24%	2%	1%
CLECs (Missing Footprint)	[8]	0%	88%	11%	1%
Total	[9]	**73%**	**24%**	**2%**	**1%**

Sources and Notes

For Panel A:

-The locations where ILECs and CLECs provide special access are provided in Table II.B 3 (ILECs) and Table II.A.4 (CLECs). Total locations, designated by a combination of the location IDs (assigned by providers) and FRN equal roughly 1.8 million. We then excluded locations at which CLECs circuits are reported as UNEs or UCLs (i.e., are not facilities-based), could not be mapped to an ILEC Footprint, and/or could not be geocoded. The number of facilities-based special access locations included in the analysis equals roughly 1 35 million.

-We estimated the number of buildings/cell towers associated with these locations by assigning locations that are within 10 meters of each other to a single building designation. This was enabled by use of the longitude and latitude coordinates specified for each location.

-We include all buildings/ towers and all ILECs in our calculations, and display the buildings/ towers and providers for the top five ILECs in lines [1] through [5].

-The buildings/towers included in Line [6] (Other ILECs) reflects the number of unique buildings/towers in which Other ILECs provide special access service but in which the top five ILECs (in lines [1] through [5]) do not. Other ILECs may also provide special access service in the buildings included in lines [1] through [5], although this is likely to be an exception and account for few observations.

For Panel B:

All calculations are based on the data included in Panel 5A.

Table 6
Bandwidth-Based Share Analysis
Facilities-Based Special Access

ILEC Service Area		Total Census Blocks: Carrier Census Blocks [a]	Census Blocks (Sole Provider): Carrier Census Blocks [b]	Census Blocks (Sole Provider): % Carrier Census Blocks [c]=[b]/[a]	Census Blocks (Sole Provider): % Total Census Blocks [d]=[b]/[8][a]
[redacted]					
Total ILECs (incl. Other ILECs)	[6]	389,221	320,801	82.4%	72.0%
Total CLECs	[7]	120,797	53,471	44.3%	12.0%
Total	[8]	**445,431**	**374,272**	**84.0%**	**84.0%**

Sources and Notes:

-The locations data derived from Table II.B.3 (ILECs) and Table II.A.4 (CLECs) in the NORC data enclave were modified to exclude: (1) circuits for which sufficient location information was missing (2,079,942 circuits); (2) circuits that could not be assigned to a census block (352,940 circuits); and (3) circuits for which bandwidth was not specified, coded as "0" and "0.01" (23,050 circuits).

[a]: census blocks for which special access is provided by at least one ILEC and/or CLEC (excluding adjustments to the data set described above).

[6]: Lines [1] through [5] plus the impact of Other ILECs are not additive because of overlaps among provision of special access within a census block.

-In the FCC data, bandwidths of greater than 1 Gbps were coded as "-99999"; we set these circuits equal to 2 Gbps for purposes of this analysis.

Table 7
Bandwidth-Based Share Analysis
Distribution of HHIs By Census Block

Panel 7A: (Census Blocks Where ILECs Provide Special Access)

	HHI Scores	
HHI Range	Number of Census Blocks	Percentage
0 - 1,500	-	0.0%
1,501 - 2,500	65	0.0%
2,501 - 5,000	3,666	0.9%
5,001 - 7,500	20,835	5.4%
7,501 - 9,999	43,800	11.3%
9,999 - 10,000	320,855	82.4%
Total	**389,221**	**100.0%**

Panel 7B: (All Census Blocks Where Special Access is Provided)

	HHI Scores	
HHI Range	Number of Census Blocks	Percentage
0 - 1,500	-	0.0%
1,501 - 2,500	65	0.0%
2,501 - 5,000	3,881	0.9%
5,001 - 7,500	21,628	4.9%
7,501 - 9,999	45,525	10.2%
9,999 - 10,000	374,332	84.0%
Total	**445,431**	**100.0%**

Sources and Notes:

-HHIs were calculated for each census block, and then grouped into categories as specified in the table.

Table 8
Comparison CLEC Fiber Presence By Census Block and Census Blocks In Which CLECs Provide Facilities-Based Special Access

Number of CLECs In Census Block	Census Blocks With CLEC Fiber	Census Blocks With CLEC Special Access Customers
1	1,655,789	165,122
2	537,224	20,276
3+	636,648	8,163
Total	**2,829,661**	**193,561**

Sources and Notes:

Census Blocks With CLEC Fiber column:

-Census blocks in which CLECs have a fiber presence was derived from the CensusBlocksWithFiber.txt file, which lists the census blocks in which CLECs have a fiber presence by CLEC FRN.

-We derived the CLEC fiber presences for each CLEC and counted the number of CLECs with a fiber presence for each census blocks.

Census Blocks With CLEC Special Access Customers column:

-We modified the CLEC locations data in Table II.A.4 by excluding locations that were not facilities-based (335,488).

- We geocoded locations using ArcGIS (based on reported longitudes and latitudes for each location) in order to assign locations to census blocks. (As indicated above, locations which could not be assigned to a census block were excluded.)

-We then counted the CLECs that provide special access in each census block.

ATTACHMENT D

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

REPLY COMMENTS OF SPRINT CORPORATION

A. Richard Metzger, Jr.
Emily Daniels
Lawler, Metzger, Keeney & Logan, LLC
2001 K Street NW, Suite 802
Washington, DC 20006
(202) 777-7700

Paul Margie
Jennifer Bagg
Walter E. Anderson
V. Shiva Goel
Harris, Wiltshire & Grannis LLP
1919 M Street NW, 8th Floor
Washington, DC 20036
(202) 730-1300

Counsel for Sprint Corporation

Charles W. McKee
Vice President, Government Affairs
Federal & State Regulatory
Chris Frentrup
Director, Senior Economist
Sprint Corporation
900 Seventh Street NW, Suite 700
Washington, DC 20001
(703) 433-3205

February 19, 2016

EXECUTIVE SUMMARY

To escape the inconvenient results of the Federal Communications Commission's ("FCC" or "Commission") comprehensive data collection regarding dedicated broadband services, known as "special access services," the incumbent local exchange carriers ("incumbent LECs") have ignored the giant elephant in the room of this proceeding: the exceedingly small percentage of special access customer locations that benefit from effective competition. Although they claim that the special access market is highly competitive, the incumbent LECs fail to offer any measure of actual competition to aid the Commission's review of the data. Instead, the incumbents provide the Commission with a flawed assessment of potential competition that relies on the incorrect assumption that, if a single non-incumbent provider has any fiber facilities of any type in a census block, then there is effective competition for all special access products across the entire block.

This assumption is absurd, and it exposes three fundamental flaws that are fatal to the incumbent LECs' already limited analysis. First, the incumbent LECs' analysis utilizes overly broad and misleading market definitions in assessing potential competition. Second, with convenient modeling, it ignores the enormous barriers to last-mile entry that competitive local exchange carriers ("competitive LECs") face. Third, the analysis wrongly assumes that a duopoly (or, more accurately, a potential duopoly) is sufficient to impose durable competitive constraints that will adequately discipline incumbent behavior.

That the incumbents have resorted to this type of analysis is telling. Indeed, in apparent recognition of the weakness of their methodology, the incumbent LECs criticize the data collection as incomplete. But they ignore that the data set remains remarkably comprehensive, and that it likely understates the extent of incumbent dominance because of the incumbents' own

omissions in response to the Commission's data request. The incumbents then turn to sources other than the data collection in a scramble to show that competition is on the cusp of materializing. A sober assessment of this other evidence, however, yields the same conclusion compelled by the data itself—cable providers and competitive LECs have not ushered in a new era of facilities-based special access competition and are in no position to do so in the near future. This evidence also shows that the ongoing transition to IP networks and growing importance of wireless backhaul are not antidotes that will rapidly cure an ailing special access marketplace, but rather vulnerabilities that threaten to leave the U.S. economy more exposed than ever to the harms of incumbent dominance.

The sensible analyses of the Commission's data now on the record establish that competition is sorely lacking in the special access marketplace. They confirm that this problem is both pervasive and responsible for high prices for broadband access that inflict extraordinary harms on consumers, innovation, and the U.S. economy at large. The massive record compiled over the course of this extensive proceeding demonstrates the urgency with which the Commission must act as it begins the process of repairing the broken special access marketplace. The record also provides the Commission with the footing it needs to take immediate steps that would promote competition for dedicated broadband services.

Sprint therefore urges the Commission to take action now to provide immediate relief to U.S. broadband markets. Specifically, the Commission should determine that incumbent LEC loyalty plans and lock-up terms and conditions are unenforceable and offer competitive providers a "fresh look" to consider alternatives to incumbent special access services where those alternatives are available. The Commission must also take steps to reduce the exorbitant rates imposed by incumbents by bringing all special access products within the existing price cap

regime and adopting new "triggers" to identify the limited areas that benefit from effective competition. After doing so, the Commission should establish an appropriate mechanism for making a one-time reduction in price caps that will lower special access prices to lawful levels and then adopt a going-forward X-factor. These initial steps will help to mitigate the ongoing harms inflicted by the incumbent LECs' dominance of the special access marketplace. Once completed, the Commission can continue to explore the use of mechanisms, including competitive benchmarks and cost models, likely to help ensure that dedicated broadband prices remain just and reasonable in the absence of effective competition.

TABLE OF CONTENTS

REDACTED – FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

REPLY COMMENTS OF SPRINT CORPORATION

Sprint Corporation ("Sprint") hereby submits these reply comments in response to Section IV.B of the Federal Communication Commission's ("FCC" or "Commission") Further Notice of Proposed Rulemaking issued on December 18, 2012, in the above-captioned proceedings.[1] As set forth below, these reply comments respond to the incumbent local exchange carriers' ("incumbent LECs" or "ILECs") comments regarding the collected special access data, expand upon Sprint's initial filing with significant support from the submissions of other commenters,[2] and provide suggestions for changes to the regulatory framework governing special access that the Commission should consider based on its review of the collected data.

---

1 *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16,318, ¶ 1 (2012) ("*2012 R&O and FNPRM*").

2 Comments of Sprint Corporation, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Sprint Comments").

I. INTRODUCTION AND SUMMARY

The record compiled in response to the Commission's comprehensive special access data collection is clear: twenty years after the Telecommunications Act opened the market to competition, the incumbent LECs remain the sole provider of special access services in the vast majority of locations where special access is sold. Despite decades of claims that competitive alternatives to special access were just around the corner, the ILECs' dominance remains firmly entrenched. Based on these findings, it is imperative that the Commission act now to repair the broken special access marketplace and implement remedial measures that will produce desperately needed relief from the incumbent LECs' marketplace dominance. Such action will spur innovative new services and benefit American consumers and the U.S. economy.

The incumbent LECs' latest assessments of competition in the special access marketplace are fundamentally flawed. First, the incumbent LECs fail to address the state of actual competition in the marketplace. Instead, they attempt to characterize their potential competition assessment as an analysis of actual competition. While it is clear why the incumbent LEC's seek to direct attention away from this fundamental starting point, the FCC should note that the lack of actual competition is evidence, in and of itself, that competition is not disciplining this critical marketplace.

Second, the incumbents' analysis of potential competition is unsound. The incumbent LECs rely on excessively broad product and geographic market definitions which exaggerate the competitiveness of the marketplace by treating different services as substitutes for one another (*e.g.*, a DS1 and the highest-capacity circuit were treated as substitutes) and overstating the size of the geographic areas within which customers have competitive alternatives. The incumbent LECs also incorrectly expand the set of so-called competing participants in the special access marketplace—and the scope of purported competition—by arguing that "best efforts" and fixed

wireless services are substitutes for the dedicated services that special access customers rely on to meet their rigorous service quality needs. The incumbent LECs then ignore the extensive barriers to potential entry—the core of any sensible assessment of potential competition—to arrive at the ludicrous claim that the mere presence of facilities anywhere in a census block somehow constitutes effective competition at every location in the block.

Finally, even after using all of these techniques to avoid presenting the Commission with an economically sound analysis, the incumbent LECs base their findings of "competition" on the presence of only two possible suppliers. Basic economic theory and FCC precedent make clear that a duopoly is simply incapable of adequately disciplining prices, terms, and conditions.

The properly structured competition and concentration analyses already submitted in the record demonstrate that the special access marketplace is composed primarily of monopolies, and to some extent duopolies, and not "competition, competition, competition." Specifically, the data demonstrate that the incumbent LEC is the sole provider at most locations. Even in the limited number of locations where an alternative facilities-based provider exists, the data confirm the absence of *effective* competition in all but a minute percentage of locations. Moreover, parties have established in the record that potential competition simply does not constrain the incumbent LECs' ability to exercise their market power. Perhaps most damningly, commenters have provided significant data and other evidence confirming that the incumbent LECs wield their well-established market power to impose unreasonable rates, terms, and conditions to the detriment of competition and consumers.

The incumbent LECs once again repeat their arguments from years past that current trends in the special access marketplace soon will magically erode their entrenched market power. For decades, ILECs have argued that broadband over power lines or some other new

offering just over the horizon will create competition in this marketplace. The data, however, demonstrate that no such competition has taken hold. Similarly, more recent offerings by cable providers simply do not presage a new emergence of special access competition. Moreover, Ethernet and other IP-based offerings have not supplanted TDM-based special access services, which continue to be the fundamental building blocks of today's special access marketplace, and the mere use of different technology to provide special access services has not created and cannot create genuine special access competition. Similarly, while wireless backhaul is a key input to competitive wireless services, the incumbent LECs are incorrect that the growing need for backhaul somehow mitigates or eliminates the incumbent LECs' market power in providing special access services.

Perhaps because the incumbent LECs are unable to rebut the overwhelming evidence of their dominance, they resort to attacking the Commission's efforts to compile a comprehensive set of marketplace data. After demanding for years that the FCC collect more data, it is telling that the incumbent LECs now want to avoid the consequence of their own request. These complaints are unfounded, and nothing more than an attempt to divert attention away from the obvious finding that the incumbent LECs hold and exploit market power. Moreover, it is worth noting that a number of the problems within the data set alleged by the incumbent LECs were created by the incumbent LECs' own failure to submit the requested information.

Rather than allow the incumbent LECs to succeed in their campaign to stall forward momentum in this lengthy proceeding, the Commission must respond to the overwhelming evidence that the incumbent LECs continue to dominate the special access marketplace by enacting both interim measures and long-term relief. With respect to interim measures, Sprint recommends that the Commission both find incumbent LEC loyalty and lock-up terms and

conditions unenforceable and offer competitive providers a "fresh look" to consider competitive alternatives where they are available.

To address the unjust and unreasonable rates that the incumbent LECs impose, the Commission also immediately should: (1) bring all special access product markets within the price cap regime; (2) adopt new "triggers" to identify areas that are subject to effective competition; (3) craft an appropriate mechanism for making a one-time reduction that will lower special access prices to reasonable levels; and (4) adopt a going-forward X-factor. Over the longer term, Sprint urges the Commission to explore alternatives for reforming supracompetitive prices going forward, including the use of competitive benchmarks and cost models.

II. THE INCUMBENT LECS' ANALYSIS OF THE DATA IGNORES THE NEED TO ANALYZE ACTUAL COMPETITION

The incumbent LECs claim to prove that actual and potential competition from alternate suppliers effectively disciplines the special access marketplace. To support this assertion, however, the incumbent LECs must turn the Commission's well-tested framework for assessing competition on its head. In particular, while the incumbents assert that the Commission's analysis of the special access marketplace must account for actual competition,[3] they nevertheless fail to produce even one quantitative measure of the competitiveness of today's special access markets. For example, whereas a traditional competition analysis examines market characteristics, such as market shares and concentration, to determine the level of actual competition,[4] the incumbent LECs disregard these vital components of any comprehensive

---

[3] Comments of CenturyLink, Inc. at ii, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Any new regime must, consistent with legal precedent and principles of sound policymaking, account for both existing and potential competition.") ("CenturyLink Comments").

[4] *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona, Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC

market power analysis. Their analysis also fails to include any assessment of the revenue or bandwidth-based shares of special access service providers.

To be sure, the incumbent LECs have every reason to avoid a traditional analysis of actual competition. As Drs. Besen and Mitchell explain, actual competition is sorely lacking because, "almost all purchaser locations, 97 percent, are served by only one or two suppliers."[5] As described more fully below, the analyses in the record also demonstrate that the incumbent LECs hold extraordinarily high shares in the provision of special access services and that special access markets are highly concentrated.[6]

Instead of even attempting to counter these facts, the incumbent LECs argue that they have "deduced that ILECs face competition for special access services in areas where competitors have made sunk investments in competitive facilities," further asserting that "[s]unk investment thrusts rivals into intense price competition."[7] While the incumbent LECs claim that their "deduction" is consistent with precedent, the definition of "market participants" (*i.e.*, actual competitors) is quite different.

Rcd. 8622, ¶¶ 28, 42 (2010), *aff'd, Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012) ("*Qwest Order*" or "*Qwest*").

5 Declaration of Stanley M. Besen and Bridger M. Mitchell ¶ 26 (dated Jan. 27, 2016), appended as Attachment 1 to Sprint Comments ("Besen/Mitchell Decl.").

6 *See* discussion *infra* Section IV.A.

7 Mark Israel, Daniel Rubinfeld, and Glenn Woroch, *Competitive Analysis of the FCC's Special Access Data Collection*, at 4, 7 (dated Jan. 26, 2016), attached to Letter from Glenn Woroch, Department of Economics, University of California, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Jan. 28, 2016) ("ILEC White Paper"); *id.* at 8 (asserting that sunk investment provides a "more accurate and complete assessment of competition" than historical market shares); *see also, e.g.*, Comments of Alaska Communications at 5, WC Docket No. 05-25 (filed Jan. 28, 2016) (arguing that "sunk investment in competitive facilities that can be used for special access is a reliable indicator of the emergence of fundamental, durable, irreversible competition, *regardless* of the number of actual competitors at any given time") (emphasis added) ("Alaska Communications Comments").

The Commission and Department of Justice define "market participants" as "all firms that currently earn revenues in the relevant market," as well as firms "committed to entering the market in the near future," and firms that "would very likely provide rapid supply responses with direct competitive impact in the event of a [small but significant and non-transitory increase in price (SSNIP)], without incurring significant sunk costs."[8] The agencies "will not presume that an entrant can have a significant impact on prices before that entrant is ready to provide the relevant product to customers unless there is reliable evidence that anticipated future entry would have such an effect on prices."[9]

Plainly, the incumbent LECs did not bother to analyze those firms that currently provide service at a particular location, or even in a census block. As Drs. Besen and Mitchell demonstrate in explaining the limited utility of facility map-based findings, "in fewer than 7 percent of the census blocks in which the FCC reports that at least one [competitive local exchange carrier ("competitive LEC" or "CLEC")] has fiber does any CLEC actually provide service to a purchaser."[10] The incumbent LECs' arguments, therefore, hinge on their baseless assertion that providers with facilities in a census block are likely to rapidly and efficiently enter the special access marketplace. That is to say, in order to adopt the incumbent LECs' strained interpretation of actual competition, the Commission would have to believe that *every* company that has fiber traversing a census block is ready, willing, and able to provide service rapidly and

---

8 *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Report and Order, 27 FCC Rcd. 10,557, ¶ 99 (2012) ("*2012 Suspension Order*") (quoting U.S. DEP'T OF JUSTICE AND FED. TRADE COMM'N, Horizontal Merger Guidelines, § 5.1 (Aug. 19, 2010), http://www.justice.gov/atr/horizontal-merger-guidelines-08192010 ("*Horizontal Merger Guidelines*")).

9 *Horizontal Merger Guidelines* § 9.1.

10 Besen/Mitchell Decl. ¶ 30.

inexpensively to every location within that census block. Thus, as former FCC Chief Economist Dr. David Sappington explains, the incumbent LECs' analysis "effectively assume[s] that a competitive supplier that has deployed fiber in a census block can serve any customer located in that block at low incremental costs[.]"[11] As explained further by Dr. Sappington, and as described in more detail below,[12] marketplace realities disprove this line of reasoning. The possibility of competitive entry at most customer locations is so remote that a provider with no customer locations within a census block should not be considered a potential competitor, much less an actual competitor or market participant.

Accordingly, the incumbents fail to demonstrate how a company with facilities in a census block—but not a single special access customer—is "very likely" to rapidly supply special access services, much less to provide "reliable evidence" that this speculative future entry will discipline prices. Furthermore, the incumbents also fail to demonstrate how a company providing special access services in one portion of a census block is "very likely" to rapidly supply special access service to all locations within the block. As Dr. Sappington concludes, "[i]n simply asserting that nearby CLEC fiber will effectively constrain ILEC pricing of special access services, the ILEC economists fail to meet the requisite burden of proof."[13]

Indeed, the pure fiction of the incumbents' account is exposed by their own history of unreliable narration. As Ad Hoc discusses in greater detail,[14] the incumbent LECs have been alleging that "competition is coming" for over a decade. For example, Verizon claimed in 2005

---

[11] Declaration of David Sappington ¶ 13, appended as Attachment 1 hereto ("Sappington Decl.").

[12] *See infra* Section III.B.

[13] Sappington Decl. ¶ 14.

[14] Comments of the Ad Hoc Telecommunications Users Committee at 3-4, 6-11, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Ad Hoc Comments").

that it faced an "explosion of alternative providers of high-capacity services" that provide "tremendous competition."[15] Similarly, AT&T alleged that its 2005 analysis demonstrated that it must contend with "substantial and growing actual and potential special access competition" from competitive providers that "constrain AT&T's prices even in areas where they have not yet deployed facilities."[16] If effective competition actually had emerged over the years, the Commission can be sure that the incumbent LECs would cite to credible, relevant data about the actual earnings of competitive firms, rather than recycle their tired claims that competition is imminent.

Worse yet, some incumbent LECs engage in linguistic gymnastics to obscure this fundamental flaw in their analysis and give the illusion that they have appropriately accounted for actual competition. For example, AT&T asserts that all firms that have a connection or fiber route in a census block, even in only a discrete area, are actual competitors because they "are actually competing in the marketplace for the right to build (what remain 'potential') direct connections to a location."[17] Others go further by asserting that competition exists where there is none. Alaska Communications, for example, indicates that the incumbent LEC analysis demonstrates that businesses "located in census blocks where there is demand for special access services are *served* by one or more facilities-based . . . competitive providers."[18] CenturyLink similarly argues that when "[e]xamined from every plausible perspective, the data show extensive competitor-deployed facilities *providing* and competing for the DS1- and DS3-capacity

---

15 Comments of Verizon at 8, WC Docket No. 05-25 (filed June 13, 2005).

16 Supplemental Comments of AT&T Inc. at 8, WC Docket No. 05-25 (filed Aug. 8, 2007).

17 Comments of AT&T Inc. at 7-8, WC Docket No. 05-25 (filed Jan. 28, 2016) ("AT&T Comments").

18 Alaska Communications Comments at 3 (emphasis added).

services at issue here."[19] But this simply is not what the data show. As noted, the statistics cited by the incumbent LECs to support their claims of a competitive marketplace do not even measure the presence of alternative providers that are actually serving customers today. Indeed, the only measures of actual competition that have been provided in the record show a marketplace dominated by the incumbents and demonstrate that they face *no* competition today at the vast majority of locations where special access service is provided.

III. THE INCUMBENT LECS' POTENTIAL COMPETITION ANALYSIS VASTLY OVERSTATES THE PRESENCE OF COMPETITION

Unable to show that actual competition disciplines their anti-competitive behavior, the incumbent LECs rely exclusively on the presence of potential competition. But the incumbents analyze potential competition incorrectly and vastly overstate the degree of competition in the special access marketplace. Most notably, the incumbent LECs allege that there is competition throughout every census block where any provider has deployed either (1) fiber facilities in any portion of the census block, even if there is no evidence that a so-called "competitor" is either willing or able to serve a single location or a single additional location in the census block, or (2) best efforts broadband services, despite the fact that these services simply are not a substitute for special access offerings.[20] Thus, the incumbent LECs' entire analysis rests on the assertion that the presence of any type of non-incumbent fiber facilities, in any location, amounts to effective competition for all special access products across an entire census block.

As explained below, this assertion contravenes established principles of competition analysis in three respects. First, it relies on incorrect product and geographic market definitions

---

[19] CenturyLink Comments at 6 (emphasis added).

[20] ILEC White Paper at 16, 20.

that are unmoored from marketplace realities.[21] Second, instead of considering whether potential entry would be "timely, likely, and sufficient to counteract the exercise of market power,"[22] it ignores the substantial barriers preventing entry in the incumbent-dominated last mile. Finally, it incorrectly assumes that the presence of one competitor creates effective, price- and conduct-disciplining competition in a relevant market.

A. The Incumbent LECs Rely on Overly Broad Product and Geographic Market Definitions

Market definition plays two key roles in performing a traditional market power analysis—"specify[ing] the line of commerce and section of the country in which the competitive concern arises," and allowing the reviewing agency "to identify market participants and measure market shares and market concentration."[23] The use of excessively broad market definitions inevitably will exaggerate the competitiveness of a marketplace, treating distinct services as substitutes and overstating the size of the geographic areas within which customers have competitive alternatives. The incumbent LECs have a compelling incentive to convince the Commission to adopt such flawed market definitions in order to conceal their continued dominance. The Commission should reject this transparent ploy summarily and instead adopt product and geographic market definitions that are consistent with both its own precedent and today's marketplace realities. When the appropriate product and geographic markets are

---

21 *Qwest Order* ¶¶ 56, 64.

22 *Id.* ¶ 28.

23 *Horizontal Merger Guidelines* § 4; *see also, e.g.*, *Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992 Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, First Report, 9 FCC Rcd. 7442, ¶ 38 (1994) (recognizing that defining product and geographic markets is an "important first step in assessing whether a firm has market power").

employed, the data demonstrate that the incumbent LECs continue to have market power in the provision of special access services to the vast majority of customer locations across the nation.

1. The incumbent LECs' product market definition is expansive, misleading, and wrong.

In analyzing the marketplace for special access services, the incumbent LECs consider only a single "special access" product market, defined broadly to "refer to business data services that include conventional TDM and Ethernet dedicated lines as well as best efforts internet access."[24] The Commission should reject this approach, because the record plainly shows that these transmission services are not substitutes for each other.

The marketplace for special access services includes a variety of separate product markets. First, channel terminations and channel mileage or transport are in distinct product markets because the two services perform fundamentally different functions.[25] As XO notes, both XO and the "industry in general use transport and channel terminations for distinct reasons, even if the two facilities may be cross-connected."[26] Thus, a customer cannot respond to a price increase for a channel termination by purchasing a greater quantity of transport. Second, as Sprint explains in its comments, the FCC should treat special access offerings as belonging to separate product markets if they involve substantially different capacity levels.[27] For example, DS1s and their Ethernet-based equivalents should be assigned to a separate product market than DS3s and their Ethernet-based equivalents. This approach is fully consistent with the Commission's prior finding that "circuits of differing capacities . . . are likely to constitute

---

[24] ILEC White Paper n.4.

[25] *See* Sprint Comments at 10-11.

[26] Comments of XO Communications, LLC at 22, WC Docket No. 05-25 (filed Jan. 27, 2016) ("XO Comments").

[27] *See* Sprint Comments at 11-12, 14-16.

separate relevant product markets."[28] Moreover, this definition appropriately accounts for the fact that Ethernet and TDM services with comparable capacities and prices are substitutes for one another and, thus, part of the same relevant product market. As AT&T itself has noted, "Ethernet is simply a *service* that can be provided over many different types of transport facilities."[29] Accordingly, "it is the capacity of the connection, rather than the technology used to deliver the capacity, that should drive categorization."[30]

The Commission also must reject the incumbent LECs' efforts to sweep services such as best efforts broadband and fixed wireless offerings into the FCC's analysis.[31] Contrary to the incumbent LECs' self-serving claims, purchasers simply do not view these offerings to be substitutes for special access services. As a result, these services are not part of *any* special access product market and should be excluded entirely from the Commission's analysis.

Best Efforts. The incumbent LECs wrongly claim that "best efforts" broadband services are effective substitutes for DS1, DS3, and other special access services. As a result, the incumbents allege that such services act as a "competitive alternative to traditional high-capacity dedicated services like traditional special access."[32] While the incumbents concede that "best-

---

28 *Qwest Order* ¶ 49.

29 Reply Comments of AT&T, Inc. at 74, WC Docket No. 05-25 (filed Feb. 24, 2010) (emphasis added).

30 Sprint Comments at 16.

31 *See, e.g.*, Comments of Verizon at 20, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Verizon Comments").

32 Comments of the United States Telecom Association at 21, WC Docket No. 05-25 (filed Jan. 28, 2016) ("USTelecom Comments"); *see also* Verizon Comments at 38 (alleging that "best efforts" services "for many customers offer a viable substitute to traditional special access and other high-capacity services").

efforts broadband differs in some respects from traditional special access," they assert that "these differences are not critical for many customers, and also are diminishing."[33]

To the contrary, the technical and other qualitative differences between best efforts offerings and special access services remain so significant that "services provided on a 'best-efforts' basis are not regarded by most purchasers as substitutes for special access dedicated circuits at guaranteed service levels."[34] Among other distinctions, best efforts services:

- Lack robust service level assurances and the "ability to prioritize traffic among different Quality of Service ('QoS') levels for different applications";[35]
- Do not include the required high level of security;[36]
- May "lack the dedicated bandwidth (in both directions) [that dedicated service] customers require";[37] *and*
- Cannot be personalized or offer customized customer support, as often is required by dedicated service customers.[38]

---

33 Verizon Comments at 39.

34 Besen/Mitchell Decl. ¶ 16.

35 Comments of Windstream Services, LLC at 13, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Windstream Comments"); *see also, e.g.*, *id.* ("The dedicated services offerings of both incumbents and competitors recognize customers' needs for higher performance levels and traffic prioritization as a significant characteristic of their services."); XO Comments at 26; Declaration of Chris McReynolds on Behalf of Level 3 Communications, LLC ¶ 20, appended as Appendix A to Joint CLEC Comments ("McReynolds Decl."); Declaration of Dan Deem, Douglas Derstine, Mike Kozlowski, Arthur Nichols, Joe Scattareggia, and Drew Smith ¶ 39, appended as Attachment A to Windstream Comments ("Deem *et al*. Decl.").

36 *See, e.g.*, Baker Decl. ¶ 31; McReynolds Decl. ¶ 20; Windstream Comments at 12 ("Customers who require dedicated services typically need very reliable connections and sophisticated integration of their communications and information technology networks—including not just transport capacity but also equipment, network security, and remote management of network infrastructure, among others.").

37 Baker Decl. ¶ 31; *see also, e.g.*, XO Comments at 26 ("Ethernet services provide high speed symmetrical transmission capabilities; Best Efforts services' speeds tend to be lower and vary considerably and generally are not symmetrical."); McReynolds Decl. ¶ 20.

38 *See, e.g.*, Deem *et al.* Decl. ¶ 40; Baker Decl. ¶ 31; Windstream Comments at 16-17.

Taken together, these characteristics make it easy to understand why Sprint, as a wholesale purchaser of Ethernet, does not purchase best efforts Ethernet service, including those offered by cable companies.[39] Similarly, Level 3 notes that it "generally cannot rely on the cable companies' standard best-efforts broadband Internet access in order to reach its customers,"[40] and "generally does not monitor or respond to the cable companies' rates, terms, and conditions for these services."[41] As Windstream succinctly concludes:

> The bottom line of all these data is consistent: dedicated services and best efforts services are in separate product markets serving separate needs. Contrary to the large ILECs' assertions, cable providers have focused on providing best effort services to those business customers that do not need the additional functionalities of, and are not willing to pay the premium for, dedicated services.[42]

Consequently, as Dr. Baker, a former FCC Chief Economist and Director of the Bureau of Economics at the Federal Trade Commission, finds, best efforts services fail the litmus test for including different offerings in the same relevant product market: "most customers of dedicated services would not substitute . . . a service provided over best efforts broadband in response to a small increase in the price of dedicated services, and few would substitute from best efforts broadband to dedicated services in response to a small decrease in the price of dedicated

---

39 Sprint Comments at 13.

40 Declaration of Gary Black, Jr. on Behalf of Level 3 Communications, LLC ¶ 16, appended as Appendix C to Joint CLEC Comments ("Black Decl.").

41 McReynolds Decl. ¶ 20.

42 Windstream Comments at 22-23.

services."[43] As a result, the Commission should exclude best efforts services from special access product markets.[44]

Fixed Wireless. Incumbent LECs urge the Commission to include fixed wireless offerings in its analysis of competition on the basis that the well-documented service quality drawbacks of those services have been eliminated.[45] Specifically, they claim that the line-of-sight limitation related to fixed wireless offerings is "long gone,"[46] and that roof access and interference are no longer viewed "as practical concerns with providing [this type of] service."[47] The incumbents further allege that there are no "valid remaining concerns about the reliability of fixed wireless."[48] The record flatly contradicts these claims.

Dr. Baker notes, for example, that fixed wireless "is not generally viewed as a substitute" for retail customers in buildings "because of reliability issues arising from congestion, interference and rain fade; the necessity of locating equipment with a clear line of sight; and building access problems."[49] Other commenters echo these findings, including several of the very providers that the incumbent LECs allege use fixed wireless services as substitutes for

---

43 Baker Decl. ¶ 31. Dr. Baker further noted that "the growth in demand for best efforts broadband by small retail customers and some mid-sized customers does not justify expanding a dedicated services product market to include best efforts broadband." *Id.* ¶ 32.

44 Besen/Mitchell Decl. ¶ 16; *see also* Black Decl. ¶¶ 16, 19 (finding that, "if providers of dedicated services were to increase the price of those services by between 5-10 percent, Level 3 would be unable to shift a significant number of its dedicated services purchases from the incumbent LEC's dedicated services to" the cable companies' best efforts broadband Internet access services or Ethernet-over-HFC services).

45 Verizon Comments at 64 ("The Commission's analysis of competition must also include fixed wireless, use of which is surging.").

46 USTelecom Comments at 12.

47 Verizon Comments at 50.

48 USTelecom Comments at 13.

49 Baker Decl. ¶ 34.

traditional special access services. For example, Windstream, which Verizon claims is particularly "bullish on this technology,"[50] emphasizes that "[f]ixed wireless may face various limitations, including congestion, interference, rain fade, and need for line-of-sight, depending on the technology and frequencies used—such that it cannot be assumed to work at every location within an area covered by specific spectrum."[51] Windstream also directly challenges the incumbent LECs' suggestion that the "inability to receive service [using fixed wireless service is] a rare exception, particularly in urban settings,"[52] finding that ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[53]

Similarly, USTelecom describes XO as a competitive provider that is "using fixed wireless to extend [its] network[]."[54] XO, however, states that, "while [it] holds wireless licenses and provides fixed wireless services, it does not consider wireless media to have the performance capabilities or sufficient reliability for the provision of its Dedicated Services."[55] Level 3 similarly concludes that "fixed wireless services play only a fringe role in the marketplace," noting that the company "does not respond to the rates, terms, and conditions offered by providers of these services."[56] In sum, the incumbent LECs' claims that fixed wireless services

---

50 Verizon Comments at 47.

51 Deem *et al.* Decl. ¶ 35.

52 Verizon Comments at 49.

53 Deem *et al.* Decl. ¶ 35. Windstream also rebuts the incumbents' claim that access issues no longer impede entry, finding that the need for a "fixed wireless provider [to] obtain building access . . . erects a significant barrier because access must be negotiated with each building owner." *Id.* ¶ 36.

54 USTelecom Comments at 14.

55 XO Comments at 25.

56 McReynolds Decl. ¶ 23; *see also, e.g.*, *id.* ("These services are subject to well-known limitations, including line-of-sight restrictions and limited range. Because of these

have overcome their historical shortcomings and are viewed today as effective substitutes for special access is baseless.

2. The incumbent LECs erred in defining the relevant geographic market for purposes of analysis.

The incumbent LECs erroneously employed an overly broad definition of the relevant geographic market as the basis for their competitive analysis. Specifically, the incumbent LECs' economists "quantif[ied] competition at the census block level because they are small, such that presence anywhere in a census block is a good indication that competition prevails throughout the areas of the census block where there is special access demand."[57] This view is plainly wrong—both the comments and FCC precedent demonstrate that the appropriate geographic market for purposes of the Commission's special access market power analysis is the individual customer location (*i.e.*, a building or cell tower) or route.

Specifically, the relevant geographic area for analyzing special access services is the area in which a special access customer would shift to a different supplier in reaction to a small, but significant and non-transitory, increase in the price of the services in question.[58] Consistent with this test, Dr. Baker noted that:

> Customers of dedicated services provided over wireline, wholesale and retail, are tied to specific locations, and cannot substitute

---

limitations, these services generally do not offer the level of speed and reliability that Level 3's customers demand."); Black Decl. ¶ 20 ("[I]n my experience, this connectivity alone is not sufficient to meet the needs of most customers that demand dedicated services.").

[57] ILEC White Paper at 4; *see also id*. at 11 ("[W]e focus our measure of competition on census blocks, asking how frequently ILECs face competition from other facilities-based providers in the same census block.").

[58] *See, e.g.*, *Qwest Order* n.142 ("A relevant geographic market has been defined 'as the region where a hypothetical monopolist that is the only producer of the relevant product in the region would profitably impose at least a 'small but significant and nontransitory' increase in the price of the relevant product, assuming that the prices of all products provided elsewhere do not change.'").

> services located elsewhere. Nor would they relocate in response to a small increase in dedicated services prices at their existing location. . . . Small differences in the price of dedicated services are similarly unlikely to matter materially to firms choosing initial locations . . . . Accordingly, service to each customer location served by a dedicated connection – whether a specific office suite within a building, a particular cell tower, or the location of the channel term or local transport facility sought by a CLEC – is appropriately defined as a geographic market.[59]

Dr. Mitchell similarly has concluded that the "Merger Guidelines' test suggests that the relevant special access geographic market for channel termination service is the building in which the customer is located."[60] These findings serve to confirm what the Commission already has stated on numerous occasions—"[c]ompetition in the provision of special access appears to occur at a very granular level."[61]

---

[59] Baker Decl. ¶ 35; *see also* XO Comments at ii ("The Commission should find the relevant geographic market for purposes of analyzing the Dedicated Services market is the individual commercial building.").

[60] Declaration of Bridger M. Mitchell ¶ 35, appended as Attachment A to Comments of Sprint Nextel Corporation, WC Docket No. 05-25 (filed Jan. 19, 2010) ("Sprint 2010 Comments"); Besen/Mitchell Decl. ¶ 19.

[61] *2012 R&O and FNPRM* ¶ 22. For example, in the *SBC/AT&T Merger Order*, the Commission found that "the relevant geographic market for wholesale special access services is a particular customer's location." *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, 22 FCC Rcd. 5662, ¶ 31 (2007) ("*AT&T/BellSouth Order*"). In the *Qwest Order*, the Commission also "reaffirm[ed] that each customer location constitutes a separate relevant geographic market, given that a customer is unlikely to move in response to a small, but significant and nontransitory increase in the price of the service." *Qwest Order* ¶ 64; *see also, e.g.*, *Wavecom Solutions Corporation, Transferor, and Hawaiian Telcom, Inc., Transferee, Applications for Consent to Transfer Control*, Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd. 16,081, ¶ 12 (2012) ("[I]t would be prohibitively expensive for an enterprise customer to move its office location in order to avoid . . . increases in the price of special access services, and . . . there are significant entry barriers to putting competitive last-mile facilities into place."); *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, et al.*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16,978, ¶ 495 n.1536 (2003) ("[W]e define the relevant geographic market for transport as route-by-route[.]").

B. The Incumbents Ignore the Substantial Barriers to Entry to Providing Competing Last-Mile Services

In addition to using incorrect market definitions, the incumbents assert that if a single non-incumbent provider has any fiber facilities of any type in a census block, then there is effective competition for *all* special access products in *every* building location in the census block.[62] The Commission should reject this assertion because it both disregards the significant barriers that providers face when seeking to deploy last-mile facilities to customer locations and unjustifiably conflates different capacity-based product markets.[63]

To determine whether potential competition imposes genuine constraints on the relevant market, the Commission focuses primarily on whether "significant barriers to entry" would prevent new providers from offering service quickly enough to counteract supracompetitive pricing and other practices of competitive concern.[64] In evaluating the significance of barriers to entry, the Commission will typically presume that potential "entry is costly and difficult" if existing facilities-based competition is limited or sporadic,[65] and will reject sweeping, cross-market generalizations about the ease of entry on the basis that competition exists elsewhere or for other services. Specifically, the Commission will not conclude that "a potential entrant economically could deploy its own fiber on a particular route in a timely manner in response to a small but significant and non-transitory increase in the price" simply because "present

---

62 Moreover, as outlined in Section III.C, even assuming *arguendo* that this claim is true, the incumbent LECs still fail to demonstrate the existence of *effective* competition.

63 *See Unbundling Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 153 (2005) ("[T]he barriers to entry impeding competitive deployment of loops are substantial") ("*TRRO*").

64 *See Qwest Order* ¶¶ 72-73, 90.

65 *Id.* ¶ 73.

competitors have deployed limited amounts of fiber in a larger geographic area."[66] The Commission will also require incumbents to present "persuasive record evidence" that any services identified as a source of potential competition "are in the same relevant product markets as those at issue" in the proceeding.[67] Finally, the Commission will consider the economics and business rules governing the "entry and exit decisions" of competitive providers,[68] and will only consider potential competition to function as a genuine competitive constraint if "entry is likely in . . . [a] reasonable timeframe."[69]

The Merger Guidelines complement the Commission's approach to analyzing potential competition. In particular, the Merger Guidelines require agencies to examine "the timeliness, likelihood, and sufficiency of the entry efforts an entrant might practically employ" in determining the competitive effects of a horizontal merger.[70] To be "timely" and "likely," potential entry must (1) "be rapid enough" to render incumbent pricing unprofitable,[71] and (2) remain economic after accounting for the "capital needed," "the risks involved," and "the cost per unit the entrant would likely incur, which may depend upon the scale at which the entrant would operate."[72] And to be "sufficient," potential entry must have the ability to "deter or counteract" incumbent pricing behavior, which requires that the "products offered by" the new entrant be "close enough substitutes to the products offered by the [incumbent] to render a price

---

66 *Id.* ¶ 78.

67 *Id.* ¶ 89.

68 *See id.* ¶ 74.

69 *See id.* ¶ 90.

70 *Horizontal Merger Guidelines* § 9.

71 *Id.* § 9.1.

72 *Id.* § 9.2.

increase by the [incumbent] unprofitable."[73] Like the Commission, the antitrust agencies also presume that potential "entry is slow or difficult" if there has been a "[l]ack of successful and effective entry" to date.[74]

When considered within the context of these frameworks, the incumbent LECs' argument that a single non-incumbent fiber facility of any kind in a census block represents effective competition for all locations in the block fails at every turn. As an initial matter, the incumbents' argument relies on the very abstractions that the Commission discredited in its prior assessments of potential competition. As the Commission has recognized, the fact that competitive facilities exist in limited locations does not imply that entry is possible everywhere, and the potential provision of service at one capacity will not adequately constrain pricing for services of another capacity where the two services are not effective substitutes for a typical consumer.[75] Moreover, because the incumbent LECs have failed to explain the dearth of competitive last-mile facilities to the vast majority of building locations across the country, they have also failed to rebut the presumption applied by both the Commission and the antitrust agencies that entry is difficult.[76] Indeed, Dr. Sappington calls into question "[t]he credibility of the ILEC economists' assertion that fiber deployment implies effective competition" due to "their failure to provide a compelling explanation for why so little CLEC fiber is actually employed to serve nearby customers."[77]

More fundamentally, however, the incumbent LECs' analysis ignores substantial direct evidence that establishes that the barriers to rapid last-mile entry in the special access

---

[73] *Id.* § 9.3.

[74] *Id.* § 9.

[75] *See Qwest Order* ¶¶ 73, 78-79.

[76] *See* Sappington Decl. ¶ 24.

[77] *Id.*; *see also id.* ¶ 25.

marketplace often are insurmountable. As explained in detail below, the combination of construction expenses, transaction costs, and suppressed demand stemming from incumbent loyalty agreements means that "potential competitors" cannot easily, quickly, or sufficiently enter a specific special access product market at a specific building location in a way that would effectively discipline incumbent behavior. In fact, these challenges typically make deployment of last-mile facilities entirely uneconomic—regardless of where the competitor's transport facilities or fiber rings are located. This is true even over lengthy time scales. Indeed, the record in this proceeding firmly establishes that these so-called "potential competitors," despite many years of substantial investment in backbone facilities, have barely made a dent in the incumbents' dominance of the last-mile.

1. The incumbent LECs ignore the substantial costs providers with fiber facilities must incur to extend last-mile facilities.

The incumbent LECs assert that once a provider has built backbone facilities such as long-haul fiber and metro fiber rings, it can quickly and effectively offer every special access product to every customer, at every location within the census block, where the fiber is located. To offer service to a customer location, a competitor must build last-mile facilities, develop access to conduit, and obtain permission to enter facilities within a building. The incumbents and their economists acknowledge, in passing, the need for crucial last-mile facilities or "laterals."[78] But they curiously assert, without elaboration, that such last-mile facilities are "inexpensive," "economic to deploy," and "a relatively low-cost expansion."[79] These assertions clearly are incorrect.

---

[78] CenturyLink Comments at 3, 27-28; ILEC White Paper at 10.

[79] CenturyLink Comments at 27-28; *see also* ILEC White Paper at 10.

First, though the incumbent LECs indiscriminately assert that any fiber facility is evidence of the ability to compete for special access customers rapidly and effectively, the required last-mile lateral cannot extend from any location on a fiber ring. Rather, a provider with fiber facilities must have a node or a splice point available for connection to the competitor's fiber.[80] When the relevant facility is long-haul fiber merely transiting a census block, the nearest node or splice point could be as much as a mile and a half away from the customer location, even if the fiber itself is very close to a potential customer location.[81] In addition, a number of obstacles could impede the ability of the provider with fiber facilities to reach even a nearby node—such as the need to build or access conduit, cross highways, or cross railroad tracks—and therefore makes it prohibitively difficult or expensive to extend a lateral.[82] As a result, it is improper to calculate a location's proximity to competitive facilities based only on the distance between a customer location and a fiber optic cable.

Second, if the provider with facilities can feasibly reach a node from a customer location, the provider's ring must have fibers available for the connection. If no fibers are available, the provider must either pull new fibers, or else it must add dense wave division multiplexing ("DWDM") equipment to the ring, which enables the transmission of multiple wavelengths of light over a single fiber or pair, thereby increasing the number of connections available on the

---

80 *See* Declaration of Ed Carey ¶ 8 ("Carey Decl."), attached as Exhibit A to Opposition to ILEC Direct Cases of Sprint Corporation, WC Docket No. 15-247 (filed Feb. 5, 2016) ("Sprint Direct Case Opp."); *TRRO* ¶ 153 n.426 ("Even if a fiber-optic facility passes directly next to a building, a competitor cannot attach a lateral wherever the ring passes a building but rather must attach its lateral at a splice point along the ring.").

81 Carey Decl. ¶ 9(a).

82 *Id.* ¶ 8(b).

existing fiber.[83] Low-end DWDM equipment can cost $20,000 to $50,000, and can reach into the hundreds of thousands of dollars, depending on the capacity the provider needs to install.[84]

Third, the provider with fiber facilities must consider the costs of the actual construction, which can rise as high as $400 per foot.[85] In cases where a customer, such as a bank, medical provider, data center, or public-safety organization demands a redundant or dual lateral configuration, construction costs can increase by 120 percent.[86] Thus, construction costs to reach a single customer located 500 feet from an available node or splice point can, in some cases, exceed $400,000. In addition to construction costs, the provider must install electronics at the customer's location, which can cost between $20,000 and $50,000 or more depending on the services needed at the location.[87]

Fourth, the provider with fiber facilities must obtain building permits, gain access to rights of way, and secure permission to install facilities at the customer's location.[88] The costs of securing these approvals can vary widely, but they can be expensive. Some railroads, for example, may charge $20,000 to $30,000 per year just to cross their tracks.[89] Moreover, these

---

83 *Id.* ¶ 9(d).

84 *Id.*

85 *Id.* ¶ 9(a); *see also TRRO* ¶ 150 ("The most significant portion of the costs incurred in building a fiber loop results from deploying the physical fiber infrastructure into the underground conduit to a particular location . . . ."); Joint CLEC Comments at 33-34; Windstream Comments at 37; Baker Decl. ¶ 40.

86 Carey Decl. ¶ 9(b).

87 *Id.* ¶ 9(c).

88 *Id.* ¶¶ 9(e), 10; *see also TRRO* ¶ 151 ("Often . . . delays are attributable to problems in securing rights-of-ways from local authorities in order to dig up streets prior to laying fiber, including lengthy negotiations with local authorities over the ability to use public rights-of-way and obtaining building and zoning permits."); Joint CLEC Comments at 33; Windstream Comments at 37; Baker Decl. ¶ 40.

89 Carey Decl. ¶ 9(e).

approvals are not guaranteed. Entities such as local governments, railroads, and property owners are not required to grant other providers access to their property, and if the provider cannot secure proper approvals, perhaps because the local government imposes a construction moratorium during a holiday season, it cannot deploy the lateral.[90]

Fifth, even if a potential competitor is willing and able to extend its network to a location despite the costs and obstacles noted above, wholesale providers like Sprint must have a customer who is willing to wait for the competitor to construct the lateral.[91] In the best case scenario, construction will take two to three months.[92] More typically, construction will take four to nine months, and it can take as long as eighteen months or more, depending on uncontrollable factors such as severe weather.[93] Sprint's customers, however, often will not wait that long, as sales cycles can be as short as thirty days.[94] In those cases, Sprint must order wholesale special access services from a provider that has already deployed facilities to the location, which is almost always the incumbent LEC.[95]

Finally, wholesale purchasers like Sprint frequently purchase special access services to service enterprise-services customers that need to connect multiple locations. If a potential competitor, or multiple such competitors, must build new facilities to reach each of a customer's locations, then the cost, complexity, and time of the project will multiply. As a result, to serve

---

[90] *Id.* ¶¶ 9(e), 10; *see also TRRO* ¶ 151 ("[M]any local jurisdictions impose construction moratoriums which prevent the grant of a franchise agreement to construct new facilities in the public rights-of-way."); Joint CLEC Comments at 33; Windstream Comments at 35.

[91] Carey Decl. ¶ 11; *see also TRRO* ¶ 151 ("[T]he construction of local loops generally takes between six to nine months absent unforeseen delay."); Windstream Comments at 37.

[92] Carey Decl. ¶ 11(b).

[93] *Id.*

[94] *Id.* ¶ 11(c).

[95] *Id.*

multi-location customers in a timely and efficient manner, Sprint frequently must default to purchasing services from the incumbent LEC, which in most cases has already deployed facilities to each of the customer's locations.[96]

As these factors demonstrate, the deployment of competitive last-mile facilities is, in direct contrast to the incumbents' claims, anything but "inexpensive" or "economic"—a fact corroborated by econometric analyses of the Commission's special access data. As Dr. Sappington explains, the regression analysis performed by Dr. Baker demonstrates that the presence of non-incumbent fiber near a given location has a much weaker impact on special access pricing than the presence of a non-incumbent entity that "actually serve[s] customers in [the] specified location."[97] These "findings raise significant questions regarding the ILEC economists' assertion that any CLEC that has deployed fiber nearby can impose strong competitive discipline on an incumbent supplier of special access services."[98] Dr. Sappington also observes that the evidence in the record demonstrates that "the presence of nearby CLEC fiber often is inadequate to impose strong competitive pressure" on incumbent special access providers.[99] Sappington further notes that in assessing industry conditions, the antitrust regulators "'consider the actual history of entry into the relevant market and give substantial weight to this evidence. Lack of successful and effective entry … tends to suggest that successful entry is slow or difficult.'"[100]

---

96 *Id.* ¶ 12.

97 Sappington Decl. ¶ 19; *see also id.* ¶¶ 19-23.

98 *Id.* ¶ 23.

99 *Id.* ¶ 25.

100 *Id*. (quoting the *Horizontal Merger Guidelines* § 9).

Of course, the incumbent LECs almost certainly do not face the same obstacles that the providers which the incumbents deem to be "potential competitors" face to deploy last-mile facilities. For example, incumbents can rely on their first-mover advantages—such as widespread deployment of existing infrastructure that was deployed while they enjoyed government-sanctioned monopoly status and existing access to rights of way and buildings—to lower the cost and complexity of reaching new locations.[101] Indeed, both Windstream and TDS Metrocom acknowledge that their incumbent LEC entities have lower deployment costs than their competitive LEC entities.[102] Thus, even if the incumbents' proclamations reflect their own experience deploying new last-mile facilities, they are irrelevant to the deployment of competitive facilities.

In addition to explaining why a provider with nearby facilities is not a potential competitor at most customer locations, these first-mover advantages also suggest that disciplining competition is unlikely to emerge even as demand for broadband services increases. This is because the need for special access services at previously unserved locations will often

---

[101] *Id.* ¶ 9(g); Joint CLEC Comments at 37 ("[I]ncumbents can 'increase capacity on many special access routes at a relatively low incremental cost (relative to the total cost of trenching and placing poles, manholes, conduit, fiber, and copper, and securing rights and access) by adding or upgrading terminating electronics.'") (quoting *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 1994, ¶ 26 (2005)).

[102] *See* Joint CLEC Comments at 38 n.107 ("'To support a build-out, CLECs must recover the costs for new infrastructure, including buried conduit, rights of way and pole access, and building entry portals and equipment rooms' (which the incumbents already possess) and 'also may be charged for building entries in instances where the ILEC is not.'") (quoting Declaration of James Butman ¶ 7, attached to Letter from Thomas Jones & Matthew Jones, Counsel, TDS Telecommunications Corporation, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Mar. 26, 2015) and Letter from Jennie B. Chandra, Vice President - Public Policy and Strategy, Windstream Corporation, to Marlene H. Dortch, Secretary, FCC, at 2, 6, WC Docket No. 05-25 (filed June 8, 2015) ("Windstream Submission")).

provide incumbent LECs with new service opportunities without increasing the size of the market addressable by a competitive LEC. In fact, because many enterprise customers prefer to purchase special access services from a provider that can serve all of their locations, new demand can work to decrease existing competition in some cases. Indeed, in Sprint's experience, large customers that move or expand to new locations where only an incumbent LEC can serve face increasing pressure to transfer all of their service to that incumbent.

Moreover, it bears noting that the incumbent LECs' own corporate experience reflects the differences that incumbent and competitive LECs face in their efforts to construct last-mile facilities. Indeed, AT&T has had considerable direct experience with the challenges of overbuilding incumbent networks as a competitive LEC. In previous filings made before it disappeared into the maw of an incumbent LEC, AT&T intimately described the barriers preventing competitive entry, contradicting each assertion about the ease of entry that it now makes as an incumbent. For example, AT&T agreed that incumbent LECs have substantially lower deployment costs than competitive LECs,[103] and that incumbents "enjoy a first mover

---

[103] *See* Comments of AT&T Corporation at 33-40, WC Docket No. 04-313, CC Docket No. 01-338 (filed Oct. 4, 2004) ("2004 AT&T Comments"). AT&T stated:

> It is also important to emphasize that the incumbents are *not* 'similarly situated' with competitors respect to loop deployment [*sic*]. Even in the relatively uncommon cases where the incumbent does not already serve a particular building with fiber, its ubiquitous fiber network generally has accessible fiber located very close to the customer's building. Accordingly, the incumbent can generally self-provide such facilities at costs far lower than a rival. The competitor's costs to construct a new loop facility are not only fixed and sunk, they are also incremental, in that the competitor cannot provide the service without incurring them. In contrast, in most cases, the incumbent is already serving the location with its own fiber, which means that it can match a competitive offer without incurring any incremental cost to provide the services the competitor is proposing – it is already doing so and has substantial room between its price and marginal cost to do so. At worst, the incumbent would only need to augment its existing terminal multiplexers by

advantage over any CLEC that is often dispositive."[104] AT&T also agreed that the relevant distance in determining competition is from building location to splice point, and not from building location to any presence of fiber,[105] expressly concluding that competitors can serve, at most, very few locations within proximity to competitive fiber.[106] And it agreed that the presence of one competitor at a location does not mean other providers will be willing to serve that location.[107] The Commission should take it from AT&T's own account as a competitive LEC, and acknowledge the "enormous real-world entry barriers" faced by potential competitors.[108]

> inserting plug-in cards (into a pre-provisioned empty slot) at each end of the new circuit for a total investment on the order of $10,000 to $15,000 – an investment far less than the competitor's.

Id. at 40.

[104] Petition for Rulemaking of AT&T Corporation at 35, RM-10593 (filed Oct. 15, 2002) ("AT&T Petition").

[105] 2004 AT&T Comments at 33-34 ("[A] competitor may have fiber on a street, but if the nearest splice point on its facility is down the street at the next intersection, the additional distance (which requires additional outside plant costs) may render the investment uneconomical.").

[106] *Id.* at 36-37 ("[A] carrier could not economically deploy a loop to serve only two DS3s of capacity unless it literally has an access point to its metro fiber *immediately outside the front door* of a building location . . . . The likelihood of this occurring in any individual case (and thus being predictable in advance, which is necessary to implement a regulatory rule) is practically zero, since splice points on competitive networks are typically placed about 2,000 feet apart.").

[107] *Id.* at 39 ("While one competitor may find it economically feasible to construct a lateral from its metro fiber to a particular location – because of its unique circumstances with regard to committed traffic and a short distance of the customer location from its fiber network – that does not mean that any other carrier whose nearest pre-designed access points is farther away could deploy loops to that same location at the same capacity level.").

[108] *Id.* at 31 (emphasis omitted).

2. Incumbent LEC loyalty plans further impede the deployment of competitive last-mile facilities.

Beyond the costs and obstacles described above, competitive LECs must overcome yet another formidable barrier to their ability to serve a new customer: unreasonable incumbent LEC terms and conditions. As Sprint and others have demonstrated throughout this proceeding,[109] and in the separate tariff investigation the Commission recently initiated,[110] these terms and conditions undermine competition in both the special access marketplace and in the provision of retail fixed and wireless broadband services.

Contrary to the incumbent LECs' recent and repeated assertions,[111] the incumbents' loyalty plans are *not* traditional term or volume discount plans with legitimate business justifications.[112] Rather, the loyalty plans are an interlocking set of unreasonable provisions that both cement incumbent LECs' special access dominance and raise the costs of the incumbents' fixed and wireless broadband rivals. By exploiting purchasers' need to avoid the incumbents' exorbitant rack rates and to obtain vital circuit portability, incumbent LECs force purchasers into plans that require them to commit all or nearly all of their historical special access demand to the incumbent LEC.[113] Then, the incumbents impose harsh shortfall and buy-down penalties to ensure that customers remain loyal,[114] and overage penalties to ensure that the incumbent captures any incremental growth in customer demand.[115]

---

[109] *See generally* Sprint Comments at 45-70.

[110] *See generally* Sprint Direct Case Opp. at 22-40.

[111] Verizon Comments at 63-65.

[112] Sprint Comments at 61-64; Sprint Direct Case Opp. at 22-24.

[113] Sprint Comments at 47-50; Sprint Direct Case Opp. at 40-47.

[114] Sprint Comments at 50-51; Sprint Direct Case Opp. at 27-30.

[115] Sprint Comments at 51-52; Sprint Direct Case Opp. at 30-34.

Over the course of many years, the incumbent LECs' scheme pushes significant amounts of special access demand into these lock-up plans. As a result, even if a competitive LEC can overcome the barriers to entry discussed above—finding available nodes and fibers; managing construction costs; securing building permits, right-of-way access, and building access; and locating customers who are willing to wait for deployment—it still must find customers who can free their demand from incumbent LEC lock-up arrangements in a reasonable amount of time for a large enough number of lines to make entry economic. This added limitation puts competitive LECs in an impossible situation. It can be difficult to find circuits that are not subject to a loyalty commitment, and it may be uneconomic for potential competitors to build facilities to serve the paltry number of available circuits. Yet, to free circuits that are committed to incumbent loyalty plans, potential competitors must cut their rates to overcome the penalties the purchasers will suffer, which also can render the decision to build facilities uneconomic. Thus, competitive providers are doubly disadvantaged—they face higher costs of entry, and their addressable market is artificially constrained by these loyalty plans.[116] Either way, loyalty plans undermine competitive entry at a significant number of locations across the country.[117]

---

[116] This is in addition to the restrictions of the addressable market that competitive LECs face because of (1) the first-mover advantages enjoyed by incumbents, and (2) the fact that interexchange and wireless carrier affiliates of the incumbent LECs remain large purchasers of special access services and rarely use competitive providers for their special access needs. Indeed, affiliates of the three largest incumbent LECs purchase approximately $10.4 billion in special access services per year, 90 percent of which is supplied by an incumbent. *See* Declaration of Susan M. Gately ¶ 13, appended to Ad Hoc Comments ("Gately Decl.").

[117] *See* Sprint Comments at 37 (citing Reply Comments of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel at 17, WC Docket No. 05-25 (filed Mar. 12, 2013)) ("By essentially freezing demand through the imposition of hefty penalties for failure to meet volume or term discounts, ILECs prevent the very competition they contend is imminent or 'potential.'").

3. The lack of competitive entry confirms that potential competitors face extraordinarily high barriers in deploying last-mile facilities, regardless of where fiber is located.

Potential competitors will deploy new facilities only if they have a reasonable expectation that they will recover their investment within a reasonable time frame.[118] If the cost of deployment exceeds expected revenues—whether because deployment costs are high, a location contains too few customers, customers order low-margin services, or too few customers can escape incumbent LEC loyalty plans—providers with facilities in an area will not deploy last-mile facilities, and they do not provide any actual or potential competition to the incumbent.

The record in this proceeding is clear: the opportunities for so-called "potential competitors" to make economically viable investments in last-mile special access facilities have been few and far between. As noted above, in only 7 percent of the census blocks that contain competitive LEC fiber does any competitive LEC actually provide special access service to a purchaser—a figure that amply demonstrates that the incumbent LECs' attempt to manipulate the data request to conjure competition is nothing but smoke and mirrors.[119]

---

[118] *See* Carey Decl. ¶ 9(f); *TRRO* ¶ 150 ("The economics of deploying loops are determined by the costs associated with such deployment and the potential revenues that can be recouped from a particular customer location."); Besen/Mitchell Decl. ¶ 30 ("[A] CLEC's network facilities often may be located at such a distance from the customer that the CLEC would be unable to recoup the costs of extending its network facilities from future sales."); Windstream Comments at 35 ("The barriers to building and extending fiber networks are high, including when a carrier may have an extensive fiber network in a metro area or within the geographic bounds of a single zip code. Even then, the carrier frequently lacks a sufficient prospect of generating the revenues necessary to sustain last-mile deployment. . ."); *id*. at 37 (***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****).

[119] Besen/Mitchell Decl. ¶ 30.

The reports of the competitive LECs are consistent with this finding. For example, the incumbents proudly cite marketing materials from Level 3 and Windstream that advertise those companies' business-broadband capabilities.[120] The very materials the incumbents cite, however, show that Level 3 claimed only 100,000 buildings within 500 feet of its network (without regard to how many of those buildings Level 3 actually serves), and Windstream made only a general claim that it *could* deploy services at locations throughout the United States. Moreover, in its data-collection comments, Level 3 reveals that after "years of aggressively deploying loop facilities," it has deployed last-mile facilities only to "approximately 34,000 commercial buildings nationwide."[121] In addition, Level 3 reports a goal of reaching "approximately 3,000 to 4,000 commercial buildings in the U.S. each year."[122] And Windstream reports that ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[123] These numbers stand in stark contrast to recent AT&T announcements that it has deployed fiber to more than *950,000 business locations* within the last several years alone as part of a single fiber deployment effort.[124] The truth is that this so-called "evidence" demonstrates that competitive LECs have not been, and are unlikely to be, able to make a significant dent in the incumbent LECs' dominance of the special

---

120 *See, e.g.*, Verizon Comments at 42-43; CenturyLink Comments at 16.

121 Joint CLEC Comments at 33.

122 *Id.* at 34.

123 Windstream Comments at 36.

124 *See* Sean Buckley, *AT&T Extends Fiber to Over 950K Business Locations, Enhances On-Demand Ethernet Reach*, FierceTelecom (Oct. 22, 2015), http://www.fiercetelecom.com/story/att-extends-fiber-over-950k-business-locations-enhances-demand-ethernet-rea/2015-10-22.

access markets, and thereby provide the effective competition that would discipline incumbent LEC pricing and behavior in the vast majority of the country.

4. The Commission should disregard the incumbents' flawed invocation of the Department of Justice potential competition screens.

The incumbents' attempts to ignore the data by relying on the Commission's prior use of Department of Justice screens to assess the existence of potential competition are also unavailing. In their comments, the incumbent LECs claim that the Department of Justice has utilized, and the Commission has endorsed in merger review proceedings, screens that conclude effective competition exists on the sole basis of a competitor's fiber optic cable being in place near an incumbent LEC's customer location.[125] The incumbents' analysis suffers from several fatal flaws.

First, the incumbents insinuate that the Department of Justice screens, and the Commission's application of those screens, look exclusively at the distance between a building and a competitor's fiber facilities. This is incorrect. The incumbent LECs ignore the fact that the Department of Justice based its screens on "revenue opportunity . . . and the distance to the closest CLEC fiber," which were designed to account for the likely cost of construction and other barriers to entry—all factors that the incumbent LECs have conveniently ignored.[126] In fact, the Department of Justice screens apply the same sort of analysis that a provider with facilities in an area would use: the screens are an attempt to determine whether a competitor could generate sufficient revenue to justify the costs of serving a new location.[127] Contrary to the incumbents'

---

[125] *See* AT&T Comments at 7-8; CenturyLink Comments at 35-36; ILEC White Paper at 14.

[126] *AT&T/BellSouth Order* ¶ 42 n.114.

[127] *See id.*

claims and as discussed above, proximity to fiber can be very misleading and is only one of many factors in that analysis.

Second, in merger reviews, the Commission has conducted a building-by-building analysis to determine whether potential competitors are likely to deploy service at a location quickly and efficiently enough to discipline incumbent LEC behavior. These reviews tend to cover small numbers of buildings spread across limited geographic areas. For example, when it reviewed AT&T's merger with BellSouth, the Commission considered the parties' application of the Department of Justice screens to a mere seventy-two buildings, all located in BellSouth territory.[128] By contrast, here the incumbents want the Commission to find that special access competition exists at all locations nationwide based solely on the presence of fiber located within some census blocks and without performing any potential entry analysis. Thus, the incumbents both reject building locations in favor of census blocks as the proper geographic unit of analysis, and also presume the ease of entry on a nationwide basis with no underlying analysis of each particular, and already overbroad, geographic market. This is an unjustifiable expansion of the Commission's standards for analyzing competition in other contexts.

Third, it also is noteworthy that the applicants in the AT&T and BellSouth transaction admitted that 31 out of 72 buildings failed the Department of Justice screens, meaning that competitive entry was unlikely at those locations.[129] Here, the incumbents remarkably ask the Commission to conclude that there are competitive alternatives to the incumbents' special access offerings at every building in a geographic area by simply looking at fiber maps, when the

[128] *Id.* ¶ 44.

[129] *Id.*

incumbents' own prior advocacy admits that competitive entry is unlikely at a significant number of locations.

Accordingly, the Commission should disregard the incumbents' efforts to misapply Department of Justice and Commission precedent to hide what the data so clearly demonstrate: incumbents are the dominant providers of special access services at the vast majority of locations nationwide, and the mere presence of competitive fiber within a census block does not offer any meaningful constraint on the incumbents' behavior. Moreover, the incumbent LECs also ignore other relevant Department of Justice guidance, which counsels that evidence regarding "the actual history of entry into the relevant market" deserves "substantial weight," because "[l]ack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult."[130] Despite many years of significant investment, the "potential competitors" have barely made a dent in the incumbents' dominance. Put simply, "actual history" confirms that "successful entry" on a scale sufficient to discipline the incumbents' behavior is unlikely to occur in the near future, regardless of where competitive fiber is located.

5. The Commission should apply the lessons learned from the failure of the pricing flexibility triggers.

In essence, the incumbents advance the presence of competitive fiber as an "evidentiary proxy" for effective special access competition.[131] The Commission, however, has been down this road before. Indeed, the now-suspended triggers for Phase I and Phase II pricing flexibility relied on only a single component of the sunk investment necessary to offer special access

---

[130] *Horizontal Merger Guidelines* § 9.

[131] AT&T Comments at 3.

services—collocation in incumbent LEC wire centers—without regard to the deployment of actual competitive last-mile facilities.

When a previous Commission adopted the triggers, it made a "prediction that collocators would eventually build their own channel terminations to end users."[132] Those build-outs never materialized, and, as a result, the incumbents remain dominant and free to exercise their market power to charge exorbitant rates and impose unreasonable terms and conditions on purchasers.[133] When it suspended the triggers, the Commission correctly recognized that evidence in the record in this proceeding "suggests our predictions were inaccurate . . . ."[134] The Commission should not make the same mistake twice by freeing the incumbents from proper pricing regulations in wide swaths of the country based on an unfounded prediction that "potential competitors" will *eventually* extend last-mile facilities from their fiber rings in volumes sufficient to provide effective competition.

C. The Incumbent LECs' Analysis Incorrectly Assumes that a Duopoly Provides Effective Competition

As outlined above, the incumbent LECs' analysis of the special access marketplace fails entirely to consider actual competition, relies on preposterously expansive product and geographic markets, and rests on an implausible theory of what constitutes potential competition. Each of these fundamental flaws clearly enabled the incumbent LECs to paint a rosier picture of competition than the bleak reality that purchasers actually face. And yet, the incumbent LECs still fail to demonstrate that *effective* competition is present in the special access marketplace.

---

[132] *2012 Suspension Order* ¶ 68.

[133] *See id*. (cataloging MSAs where only the incumbent LEC was providing service several years after receiving Phase II pricing flexibility).

[134] *Id*. ¶ 71.

Instead, the incumbent LECs erroneously suggest that the presence of a single actual or "potential" additional provider—a so-called "competitor" or "competitive facility"—in a census block is sufficient to ensure an effectively competitive marketplace for special access services and, consequently, should result in wholesale deregulation of their offerings.[135]

Basic economic theory and common sense thoroughly debunk any notion that a duopoly provides competition sufficient to prevent the incumbent LECs from imposing unjust and unreasonable prices, terms, and conditions. For example, Dr. Besen has established that "a wide variety of theoretical models recognize, and even predict, that a duopoly more typically leads to higher prices than would prevail in a market with a larger number of firms and that the entry of additional firms would result in lower prices."[136] Similarly, Dr. Baker indicates that "[m]arkets with two providers . . . are . . . unlikely to perform competitively," further noting that "the economics literature recognizes that markets with more than one significant firm do not necessarily perform competitively, and that firms will likely exercise market power in markets with few market participants."[137] Indeed, Chairman Wheeler himself noted that a duopoly is "a marketplace that is typically characterized by less than vibrant competition."[138]

---

[135] While the incumbent LECs generally refer to the presence of competitive "providers," their results plainly do not report whether more than a single "competitor" is present in an area they deem competitive. *See, e.g.*, ILEC White Paper at 20 (identifying census blocks "where the data show that *at least one* CLEC has deployed facilities") (emphasis added); CenturyLink Comments at 38 (arguing that the incumbent LECs should receive "relief from price caps where there is *one* or more actual competitor providing the same service in the relevant geographic unit using its own facilities, third-party facilities, or UNEs") (emphasis omitted).

[136] Declaration of Dr. Stanley M. Besen at 2, attached to Letter from Andrew L. Lipman, Counsel, TDS Metrocom et al., and Thomas Jones, Counsel, Cbeyond et al., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 08-24 (filed Apr. 23, 2009).

[137] Baker Decl. ¶ 48.

[138] Tom Wheeler, Chairman, FCC, at 4, The Facts and Future of Broadband Competition, Prepared Remarks at the 1776 Headquarters, Washington D.C. (Sept. 4, 2014).

These findings apply with even more force to the special access marketplace. As Drs. Besen and Mitchell have established, likely "four—and certainly more than two" suppliers that actually compete with one another in a limited geographic area "are needed to give a competitive outcome in the special access markets under consideration in this proceeding."[139] Indeed, as Dr. Baker recognizes, a duopoly is insufficient because, "in many cases, one of the two firms will provide no more than a limited constraint on the prices charged by the other."[140] In particular, Dr. Baker correctly notes that:

> Most duopoly markets are served by an ILEC and a CLEC. Many CLECs experience substantial impediments to expanding output, including high marginal costs of serving another customer in a building . . . . Under such circumstances, the CLEC would not have an incentive to compete aggressively with the ILEC on price. For the same reason, some or all of the CLECs participating in the markets served by more than two providers may have limited incentive to compete aggressively in those locations.[141]

The expert analyses submitted by Sprint and other commenters demonstrate that the vast majority of customer locations are served by only the incumbent LEC, or the incumbent LEC and one competitive provider. Specifically, Drs. Besen and Mitchell conclude that there are three suppliers at only 2 percent of locations and four or more suppliers at only 1 percent of locations.[142] Mirroring these findings, Dr. Baker finds that 98.1 percent of locations were served

---

[139] Besen/Mitchell Decl. ¶ 47; *see also, e.g.*, *id*. ¶¶ 43-47 (outlining numerous studies that "all support the unsurprising conclusion that multiple providers are needed to ensure that a competitive outcome is achieved"). As Drs. Besen and Mitchell further note, given the dearth of competition that the data disclose, there would be little difference between using a "three competitor" standard and a "four competitor" standard. *Id*. ¶ 31.

[140] Baker Decl. ¶ 49.

[141] *Id.*

[142] Besen/Mitchell Decl. ¶¶ 25 (Table 1), 26.

by only one or two facilities-based providers.[143] Put simply, there can be no doubt that, as Dr. Baker observes, the "structure of [the relevant special access] markets raises competitive concerns."[144]

IV. APPROPRIATE ANALYSES OF THE DATA CONFIRM THAT INCUMBENT LECS POSSESS AND EXERCISE MARKET POWER IN THE PROVISION OF SPECIAL ACCESS SERVICES

A. The Analyses Submitted in the Record Confirm that Incumbent LECs Remain Dominant in the Provision of Special Access Services

The results of the properly structured competition and concentration analyses now in the record overwhelmingly demonstrate that incumbent LECs dominate the special access marketplace "by any measure."[145] Indeed, these results are consistent whether one examines the number of competitive suppliers in the relevant geographic and product markets or the market shares that competing suppliers have captured.

Presence of Facilities-Based Competitors. As Sprint explains in its comments, the analysis performed by Drs. Besen and Mitchell reveals that, at the vast majority of buildings and cell towers, the incumbent LEC is the only facilities-based provider of special access services. In particular, the incumbent LEC is the sole provider of special access service in approximately 73 percent of locations.[146]

The analyses submitted by other experts reach the same conclusions. Notably, Dr. Baker concludes that 77.3 percent of buildings in the FCC's data have only one in-building provider.[147] Susan M. Gately, an economic and policy expert in the telecom arena, similarly finds that,

---

[143] Baker Decl. ¶ 44.

[144] *Id.* ¶ 47.

[145] Ad Hoc Comments at 4.

[146] Besen/Mitchell Decl. ¶¶ 25 (Table 1), 26.

[147] Baker Decl. ¶ 44.

"[u]sing assumptions that result in the most conservative estimate of the percent of locations at which the ILEC is the only provider of facilities-based services, the data indicate that ILEC-only locations represent between 71 [percent] and 78 [percent] of total locations nationwide with special access demand."[148]

These quantitative findings also are consistent with the marketplace experiences described in declarations filed with the initial round of comments. For example, Level 3's Vice President of Carrier Relations notes that "Level 3 purchases a significant majority of its dedicated services requirements from the incumbent LECs" due to "the lack of competition at many locations and the constraints associated with the terms and conditions in incumbent LEC discount plans."[149] Similarly, Windstream officials note that, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[150]

The commenting parties also note that market analysts have concluded that the special access marketplace remains dominated by the incumbent LECs. For example, Windstream cites a recent Sanford Bernstein report estimating that, in aggregate, "competitive carriers, as well as cable, have built facilities to a small portion (less than 5 percent) of towers and business

---

148 Gately Decl. ¶ 4; *see also id*. ¶ 3 ("[M]ost customers—be they other wireline carriers (wireline CLECs, and IXCs), mobile wireless carriers, or end users—have but one provider to choose from at the locations where they need to buy service—and that one provider is the ILEC.").

149 Black Decl. ¶ 8.

150 Deem *et al.* Decl. ¶ 80 (further noting that ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****).

locations."[151] Finally, all of these analyses are consistent with the Commission's own preliminary conclusion that the special access data "show that incumbent LECs remain the sole facilities-based provider of TDM-based special access services to a majority of business locations that demand or are likely to demand business data services nationwide."[152]

Moreover, the data demonstrate that the small percentage of buildings at which the incumbent is not the sole supplier almost always are served by only two providers. For example, Drs. Besen and Mitchell find that there are two suppliers—the incumbent LEC and a competing carrier—at about 24 percent of locations.[153] Dr. Baker similarly concludes that 20.8 percent of locations have no more than two in-building providers.[154] In other words, virtually all locations—97 percent—are served by only one or two suppliers.[155]

Bandwidth-Based Concentration. Calculations based on bandwidth-based market shares further confirm the incumbent LECs' dominance. For example, Drs. Besen and Mitchell calculate Herfindahl-Hirschman Index ("HHI") values using these data, concluding that the HHI exceeds the level characterized by the antitrust agencies as "Highly Concentrated" in more than 99 percent of both census blocks in which only an incumbent LEC provides special access services and those in which the incumbent LEC is not the sole supplier of special access services.[156] Using bandwidth-based information to perform a share analysis, Drs. Besen and

---

[151] Windstream Comments at 33.

[152] *See Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Order Initiating Investigation and Designating Issues for Investigation, 30 FCC Rcd. 11,417, ¶ 4 (2015) ("*Designation Order*").

[153] Besen/Mitchell ¶¶ 25 (Table 1), 26.

[154] Baker Decl. ¶ 44.

[155] Besen/Mitchell ¶¶ 25 (Table 1), 26; *see also, e.g.*, Baker Decl. ¶ 44 ("[A]lmost all buildings (at least 95 percent) have no more than two providers.").

[156] Besen/Mitchell Decl. ¶¶ 36 (Table 3), 37-38.

Mitchell further find that the incumbent LECs are the sole providers of special access services "in 72 percent of all census blocks in which they provide service."[157] Moreover, Dr. Baker finds that, "in the median metropolitan area (CBSA) nationwide, ILECs account for 82 [percent] of dedicated services bandwidth overall."[158]

Revenue-Based Shares. The analyses of the revenue data made available for review again reach the same conclusion: incumbent LECs continue to possess market power in the provision of special access services. Drs. Besen and Mitchell calculate revenue-based market shares for each of the major incumbent LECs, both for all special access services sold and for special access offerings of differing capacities. Notably, "the weighted-average ILEC share of revenues of all special access services combined is about 74 percent with a relatively small variation among carriers."[159] Moreover, the incumbent LECs have near complete dominance of the 0-10 Mbps and 10-50 Mbps product markets, which represent the vast majority of special access lines. Specifically, the incumbent LECs' share of this bandwidth range amounts to 85 percent.[160]

Ad Hoc's analysis of revenue-based shares further buttresses the conclusion that the incumbent LECs remain overwhelmingly dominant. Ad Hoc finds that the incumbent LECs receive 90 percent of the revenues for owned TDM-based facilities.[161] Similarly, Windstream

---

157 *Id.* ¶ 28 n.45.

158 Baker Decl. ¶ 45.

159 Besen/Mitchell Decl. ¶ 40; *see also id.* ¶ 39 (Table 4).

160 Declaration of William P. Zarakas and Susan M. Gately ¶ 17, appended as Attachment 2 to Sprint Comments ("Zarakas/Gately Decl.").

161 Ad Hoc Comments at 6.

notes that market analysts have reported that incumbent LECs accounted for 81 percent of the wholesale local transport revenue market in 2014.[162]

Potential Competition. Importantly, the expert analyses filed by Sprint and others in the record fully account for the impact of potential competitive entry on the special access marketplace. The threat of potential competition will constrain the prices and practices of incumbent LECs only if, within the relevant geographic area, there is an adequate number of rival firms that are capable of providing the products that consumers want quickly and efficiently. In the special access marketplace, none of these prerequisites are present.

First, even across census block areas, there still is only the incumbent LEC or one other provider present in the overwhelming majority of blocks.[163] In addition, fewer than 3 percent of census blocks contain three suppliers and fewer than 2 percent of blocks contain four or more suppliers.[164] Of course, because the census block is an overly broad geographic market, these minute percentages still overstate the extent of potential competition. Indeed, the presence of a competing provider in one part of a census block does not mean that the carrier is able or willing to compete against the incumbent LEC in all parts of the block "or even that the 'potential competitor' provides the same special access service as the ILEC."[165]

Second, as discussed above, competitive providers continue to face extraordinarily high barriers to building out facilities to individual locations. As the Joint CLECs correctly find, the incumbent LECs' "stranglehold over the connection to the end user is the source of the

---

[162] Windstream Comments at 34.

[163] Besen/Mitchell Decl. ¶¶ 27 (Table 2), 28.

[164] *Id*.

[165] *Id.* ¶ 29.

incumbent LECs' enduring market power, and there is no prospect that it will abate in the foreseeable future."[166]

In short, the quantitative and qualitative analyses of the special access data submitted by Sprint, the Joint CLECs, and other parties lead to the same inescapable conclusion: "the incumbent LECs possess substantial and persisting market power in the provision of dedicated services throughout the United States."[167] As a result, the data confirm "what nearly all parties other than the ILECs have been reporting . . . for many years: there is not enough competition in the special access market to justify the Commission's 'pricing flexibility' rules for the ILECs' TDM services or to justify regulatory forbearance for their non-TDM services."[168]

B. The Data and Other Evidence Confirm that the Incumbent LECs Employ Their Market Power to the Detriment of Consumers and Competition.

The record also confirms that the incumbent LECs wield their sweeping command over the special access marketplace to raise prices and suppress competition in downstream markets for broadband services. The pervasive, supracompetitive prices charged by incumbents create economic losses that, according to some estimates, exceed over $20 billion per year in foregone output and almost 100,000 fewer American jobs.[169] Ultimately, these charges cost the U.S.

---

166 Joint CLEC Comments at 48.

167 *Id.* at 1-2; *see also, e.g.*, Besen/Mitchell Decl. ¶ 22 ("[I]n the vast majority of special access product and geographic markets, the incumbent LECs do not face effective competition."); XO Comments at 4 ("ILECs continue to have market power for the provision of Dedicated Services in virtually all locations around the country. This holds for customers with lower performance needs who continue to access TDM services over ILEC facilities (regardless of whether they purchase directly from an ILEC or from a CLEC that acquires the facilities or services from the incumbent at wholesale), as well as for customers who use higher performance Ethernet services[.]").

168 Ad Hoc Comments at i.

169 Economist Report of Stephen E. Siwek at 3 (dated Mar. 2011), attached to Letter from Maura Corbett, Spokesperson, NoChokePoints Coalition, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Mar. 15, 2011).

economy far more by depriving it of the increases in broadband uptake, speed, capacity, and innovation that a truly competitive marketplace for enterprise broadband services would provide.

1. Baker's regressions make clear that the lack of competition has resulted in supracompetitive prices.

Using billing information provided under the special access data request, Dr. Baker compares the impacts of in-building and nearby competition on incumbent retail pricing for special access services,[170] and finds that in-building competition constrains incumbent pricing much more substantially than competition in even nearby buildings. In other words, Dr. Baker's results not only provide econometric confirmation that the barriers competitive providers face to overbuild incumbent facilities are often insurmountable,[171] but also reveal that the incumbent LECs are inflicting grave harms on the special access marketplace by using their dominance to raise prices above competitive levels. Indeed, Dr. Baker finds that while "the estimated magnitude of an incremental provider varies across specifications, it is evident that additional providers make a difference economically" and, critically, that downward pressure on pricing is more than three times greater in locations where alternative providers have in-building facilities.[172] The presence of additional in-building providers, however, is exceedingly rare: only 2 percent of building locations where an incumbent provides service have more than two providers, and less than 1 percent have more than three.[173] In all other locations, Dr. Baker's analysis establishes that incumbents charge rates above competitive norms, as their pricing behavior remains un- or under-disciplined by available competition.

---

[170] *See* Joint CLEC Comments at 49-50; Baker Decl. ¶ 63; Sappington Decl. ¶¶ 19-23.

[171] *See supra* Section III.B.

[172] Baker Decl. ¶¶ 63-64.

[173] Besen/Mitchell Decl. ¶ 25 (Table 1); *see also* Baker Decl. ¶ 44.

2. The incumbent LECs are engaging in a price squeeze by charging more for wholesale inputs than for retail services.

Using their power—and propensity—to raise prices, the incumbent LECs are also engaging in price squeeze tactics to diminish competition for broadband services. Numerous commenters report that incumbent LECs charge more for wholesale services than they do for retail services. Indeed, a Level 3 executive reports that the company's leased lines are "usually" purchased as an "incumbent LEC DSn-based dedicated service," and that these services are priced so high that Level 3 "often cannot rationally charge a price below the incumbent LEC wholesale price for the underlying circuit."[174] TDS Metrocom similarly reports that for capacities "generally in demand" by customers of its competitive LEC arm, incumbent LECs charge wholesale rates that "are typically higher than" the rates the incumbent LECs "offer at retail to TDS CLEC's customers"—even when the customer is located "in an on-net building."[175]

This behavior applies to both TDM and packet-based, and low-capacity and high-capacity, special access services. Indeed, Windstream provides examples of large incumbents "charging the[ir] carrier customer[s] much more than a comparable retail customer, even when the carrier customer makes significant volume commitments that the retail customer does not," for certain Ethernet services.[176] Similarly, XO reports that in numerous markets, "AT&T's wholesale Ethernet prices are so high as to prevent XO from providing retail services in buildings where it must rely on ILEC services as wholesale inputs."[177] And the Joint CLECs note that Dr. Baker's review of average prices for both DS1 and lower-capacity Ethernet services

---

[174] Joint CLEC Comments at 27.

[175] Comments of TDS Metrocom, LLC at 25, WC Docket No. 05-25 (filed Jan. 27, 2016) ("TDS Comments").

[176] Windstream Comments at 51.

[177] XO Comments at 43.

confirms that "incumbent LECs' wholesale prices for these services are generally higher or only slightly lower than their retail prices for the same services."[178]

Sprint's experience provides further evidence that incumbent LECs use their wholesale pricing power to suppress retail competition—and that the "price squeeze" observed by competitive providers of wireline broadband services is part and parcel of a larger strategy to raise rivals' costs in all downstream retail markets for broadband services. Sprint has direct experience with incumbent LEC wholesale services that are priced above retail rates, thereby ensuring that customers—including the U.S. government—would not benefit from a more efficient Sprint wireline offering.[179] Sprint has also been forced to overcome high wholesale rates for wireless backhaul, and enormous penalties paid to the incumbent LECs when Sprint invests in critical upgrades of its wireless network as it competes with the incumbents' wireless affiliates.[180]

The point of this behavior is to ensure that any impact on incumbent pricing from non-facilities based competition remains small—and, in that respect, Dr. Baker's analysis confirms that the incumbents' strategy has been a remarkable success.[181] Moreover, because retail special access services are typically provided alongside voice, collaboration, and cloud platform technologies, the incumbents' price squeeze deprives the marketplace of the competitive

---

[178] Joint CLEC Comments at 26; *see* Baker Decl. ¶ 72.

[179] *See* Letter from Paul Margie, Counsel, Sprint Corporation, to Marlene H. Dortch, Secretary, FCC, at 5-6, WC Docket No. 05-25 (filed Sept. 23, 2015).

[180] *Id.* at 6.

[181] *See* Joint CLEC Comments at 49-50 (explaining the small impact that the presence of competitive facilities in "nearby" locations has on incumbent pricing as a result of the fact that "nearby" providers will often lease incumbent lines to provide service).

dynamics needed to ensure that American businesses, universities, hospitals, and schools receive high-quality and innovative communications services of all kinds.

3. Other evidence validates that prices are excessive.

Other analyses confirm that incumbent LECs charge supracompetitive rates for special access services. As previously explained in the record of this proceeding, the Government Accountability Office ("GAO") has concluded that "facilities-based competition for dedicated access services to end users at the building level (*i.e.*, analogous to channel terminations to end users) does not appear to be extensive,"[182] and that "prices and average revenues are higher, on average, in phase II MSAs—where competition is theoretically more vigorous—than they are in phase I MSAs or in areas where prices are still constrained by the price cap."[183] Moreover, as Sprint has reported previously, month-to-month rates for DS1 and DS3 unbundled network elements are generally priced substantially below even the loyalty-plan rates for special access services that incumbents charge upon the customer's acceptance of a purchase commitment, and far below the rack rates buyers must pay to avoid loyalty plans.[184] And according to a recent study by Ofcom, the telecommunications regulator in the United Kingdom, the "lowest available" rates in the United States for the "super fast" wholesale services that the incumbent LECs insist benefit from significant competition are still more than double the rates available in

---

[182] U.S. GOV'T ACCOUNTABILITY OFFICE, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO-07-80, at 19 (Nov. 2006), http://www.gao.gov/products/GAO-07-80; *see also id*. at 2 ("Limited competitive build out in these MSAs could be caused by a variety of entry barriers, including zoning restrictions, or difficulties in obtaining access to buildings from building owners that discourage competitors from extending their networks.").

[183] *Id*. at 13.

[184] *See* Sprint 2010 Comments at 27 n.88

the United Kingdom.[185] Indeed, except for France, the United States enjoys the dubious distinction of having the highest special access rates in the world.[186]

Commenters have placed additional analyses on the record in further support of the conclusion that current pricing for special access services far exceeds competitive levels. For example, INCOMPAS compares incumbent retail rates for Ethernet special access services to imputed retail rates calculated using the wholesale rates for Ethernet services that rural incumbent LECs charge under the National Exchange Carrier Association Access Service FCC Tariff #5 (the "NECA Tariff #5"). Despite the advantages incumbents enjoy as a result of their size, incumbency, and provision of services in dense, low-cost of service areas, their retail rates exceed "*by an order of magnitude*" the retail rate a carrier could charge if it used the rural carrier's wholesale offering as an input for a finished retail product.[187] TDS Metrocom also compared NECA Tariff #5 rates to the retail rates charged by incumbents, and similarly concluded that incumbent rates far exceeded the rates even rural competitors charge for Ethernet special access.[188]

V. MARKETPLACE TRENDS DO NOT PRESAGE A SUDDEN EMERGENCE OF SPECIAL ACCESS COMPETITION

In a further effort to escape the reality confirmed by the data, the incumbent LECs argue that recent trends in the special access marketplace arising since the submission of the 2013 special access data have magically changed the competitive landscape. They assert that cable

---

[185] *See* Letter from Sheba Chacko, Head - Americas Regulation and Global Telecoms Policy, BT Americas Inc., to Marlene H. Dortch, Secretary, FCC, Attachment at 7, WC Docket No. 05-25 (filed June 3, 2015).

[186] *Id.*

[187] Comments of INCOMPAS at 15, WC Docket No. 05-25 (filed Jan. 27, 2016) (emphasis added).

[188] TDS Comments at 27.

entry, the growth of Ethernet, and rapidly increasing needs in wireless backhaul have transformed the special access marketplace so drastically that Commission regulations are not needed—regardless of what the collected data reveal. Emphasizing the supposed magnitude of these developments, CenturyLink claims that "the Commission does not appear to have fully grasped [their] extent and significance."[189]

These claims are, of course, incorrect. There has been no fairy dust sprinkled on the special access marketplace in the form of effective competition—and the incumbent LECs can point to no evidence that competition has suddenly "sprung up"—in the short period between the data collection and today. The incumbent LECs peddled these arguments in the past, and they hold no more truth now than they did before.

A. Cable Entry Has Not Produced Effective Competition

Resting on the notion that the data from the 2013 data collection are already outdated, the incumbent LECs point to the cable industry as evidence that the special access marketplace has since evolved to become a robust, dynamic market where the incumbent LECs face "aggressive competition."[190] The incumbent LECs argue that the data collection understates competition because the data do not account for cable entry. But, contrary to these claims, the cable industry is not a miraculous solution to the problem of stalled competition in the special access marketplace.

Although incumbent LECs argue that cable is a viable alternative to purchasers, the reality is that cable still comprises a small portion of the overall market—only $1 billion of the

[189] CenturyLink Comments at 12-13.

[190] *Id.* at 11; *see also* AT&T Comments at 13-15; Verizon Comments at 28-40.

$14 billion local wholesale transport market.[191] Nevertheless, Verizon asserts that, in a span of a mere two years, "[c]able companies have expanded quickly and aggressively into the high-capacity marketplace."[192] Likewise, AT&T insists that practically overnight the entire marketplace has been transformed through the "explosive growth and facilities investment undertaken by cable companies."[193] Verizon cites reports, marketing materials, and quotes from earning transcripts as evidence that cable companies are expanding special access services to enterprise customers.[194] Yet these reports do not actually indicate whether the cable companies offer meaningful competition in the special access marketplace.[195] For instance, as evidence of cable competition, Verizon points to Comcast's announcement that it will expand retail enterprise offerings through partnerships with other cable providers that have existing facilities, rather than creating new facilities in marketplaces that are currently dominated by an incumbent LEC.[196] Importantly, these materials make no mention of any plans to expand Comcast's provision of wholesale special access at all. In Sprint's experience, cable companies have been reluctant to provide an aggressive wholesale alternative to competitive enterprise broadband providers, and there is no certainty that they will continue to provide any wholesale alternative as they seek to expand their retail enterprise business. Moreover, the majority of services that cable companies offer are not true competitive alternatives, but rather are comprised of Ethernet over

---

[191] Sean Buckley, *Cable Becomes Emerging Special Access Source for CLECs, but Trails AT&T and CenturyLink's Ubiquity*, FierceTelecom (Mar. 26, 2015), http://www.fiercetelecom.com/story/cable-becomes-emerging-special-access-source-clecs-trails-att-and-centuryli/2015-03-26.

[192] Verizon Comments at 30.

[193] AT&T Comments at 3.

[194] Verizon Comments at 32-33.

[195] *Id.* at 32-35.

[196] *Id.* at 31.

coaxial or hybrid fiber coaxial ("EoHFC") services that are fundamentally different from the special access services provided by the incumbent LECs.

Cable's modest inroads into special access highlight the fact that incumbent LECs overwhelmingly dominate the provision of special access services due to their broad reach in wireline network infrastructure. A far-reaching network—something cable companies readily admit that they lack[197]—is critical to being a competitive choice for larger, multi-location enterprise customers. For example, Charter states that "a provider typically must have a broad regional footprint without significant gaps in coverage areas to serve large enterprises with multiple sites across given geographic regions effectively."[198] Comcast confirmed that, without a sufficiently broad network, cable companies could not act as "meaningful competition against incumbent providers."[199] Nevertheless, Verizon selectively cites portions of marketing materials from cable companies in order to illustrate that cable has broader service areas now than ever before.[200] Even if these advertisements were accurate representations of network coverage, cable companies cannot "duplicate the entirety [of] incumbents' ubiquitous networks."[201] As a result, competitive LECs continue to rely on incumbent LECs as the controlling seller of special access services.

---

[197] Opposition to Petitions to Deny and Response to Comments of Comcast Corporation and Time Warner Cable Inc. at 70-71, MB Docket No. 14-57 (filed Sept. 23, 2014) ("Because larger businesses and enterprise customers have locations spanning multiple areas and cable footprints, Comcast, TWC, and other cable companies have been unable to offer seamless business service option . . . .") ("Comcast and TWC Opp.").

[198] Public Interest Statement of Charter Communications Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership at 35-36, MB Docket No. 15-149 (filed June 25, 2015).

[199] Comcast and TWC Opp. at 70-71.

[200] Verizon Comments at 34-35.

[201] Reply Comments of COMPTEL at 10, WC Docket No. 05-25 (filed Mar. 9, 2015).

Furthermore, even if the cable companies offered the sort of "aggressive competition" the incumbent LECs describe in the limited number of places where the cable companies' networks extend, the end result would be that only small sections of the market would transform from a monopoly to a duopoly, which, as discussed earlier, would hardly create an effectively competitive marketplace.[202] This is hardly the type of competitive pressure that would discipline a firm's conduct; the Commission has found that duopolies present similar pricing risks to monopolies and create "significant decreases in consumer welfare."[203]

B. TDM Remains the Most Common Special Access Technology, and Ethernet Has Not Changed the Competitive Landscape

The incumbent LECs suggest that customers are rapidly migrating from TDM to Ethernet.[204] They suggest that growth in the use of Ethernet and other packet-based technologies has (1) reduced the importance of TDM services[205] and (2) created a competitive special access marketplace.[206] This is simply not true. Special access services provisioned using TDM technologies are, and continue to be, a large and critical part of the special access market. And while there has been an increase in usage and demand for high-capacity services in the special

---

202 *See supra* Section III.C.

203 *See, e.g.*, *Wireline Competition Bureau Seeks Comment on Applying the Qwest Phoenix Forbearance Order Analytic Framework in Similar Proceedings*, Public Notice, 25 FCC Rcd. 8013, ¶ 29 (2010).

204 Verizon Comments at 11; AT&T Comments at 16; CenturyLink Comments at 11-12.

205 *See, e.g.*, AT&T Comments at 21-22 ("Customers are rapidly abandoning legacy TDM technologies . . .").

206 *See, e.g.*, CenturyLink Comments at 13-14 ("When the full range of competitive alternatives are properly taken into account, it should be clear that ILECs provide TDM-based special access services within a broader, high-capacity transmission marketplace in which they are steadily losing market share to other providers.").

access marketplace—including from those consumers that use Ethernet as the underlying technology—this growth has not changed the competitive landscape.

Far from being "rapidly headed for extinction,"[207] TDM services remain critical. As the Commission recognized in the *Tariff Investigation Designation Order*, "TDM-based special access sales totaled approximately $25 billion, or about 60 percent of the total special access market of $40 billion," and "use of legacy business services will remain stable at least through 2017."[208] Further, as Sprint explained in its initial comments:

> The TDM services provided by the incumbent LECs—both standalone offerings and inputs to the Ethernet services provided by competitive supplies—continue to be a critical part of the special access marketplace. These TDM-based special access services are likely to remain the "basic building blocks of business data services for the foreseeable future," at least until such time as packet-based services are made available at competitive rates.[209]

In a properly functioning marketplace, TDM-based services would have long been phased out and replaced with faster and more efficient Ethernet-based technologies. In today's marketplace, however, competitive providers have no choice but to utilize TDM-based technologies, in large part, due to "[t]he incumbent LECs' continued, and almost exclusive focus on their legacy TDM-based special access offerings . . . ."[210]

Moreover, the special access data belie the incumbent LECs' assertions that high-capacity services provisioned via Ethernet have consumed a significant or even sizable part of the marketplace. Notably, the highest-capacity circuits, those with speeds greater than or equal

---

[207] AT&T Comments at 22.

[208] *Designation Order* ¶ 14. In addition, the Commission found that "for some of the largest price cap incumbent LECs, DS1 and DS3 channel termination sales actually increased from 2010 to 2013." *Id.*

[209] Sprint Comments at 70 n.205 (citing *Designation Order* ¶ 13).

[210] *Id.* at 72.

to 200 Mbps, accounted for just under 6.5 percent of all special access circuits sold.[211] Indeed, lower-capacity circuits (*i.e.*, circuits up to 50 Mbps), such as TDM-based DS1 and DS3 legacy services and their Ethernet equivalents, account for over 88 percent of all special access circuits sold,[212] and almost three-quarters—over 72 percent—of the incumbent LECs' total special access revenues.[213] Given the critical importance to the incumbent LECs' bottom line of lower-capacity services, many of which are and will continue to be provisioned using TDM, it is no surprise that the incumbent LECs want the Commission to ignore this enormously profitable segment of the marketplace.

The fact remains that use of Ethernet as the underlying technology has not overtaken TDM as the dominant special access product. Even if it had, that alone would not imply the sudden emergence of special access competition. Contrary to the incumbents' claims,[214] the increase of special access products provisioned via IP-based technologies, such as Ethernet, has little bearing on competition. Instead, control of the physical facilities over which special access services are provisioned is key. On the other hand, "the *capacity* of special access services creates important distinctions that warrant separate treatment . . . ."[215] As explained, this is because consumers treat Ethernet and lower-capacity TDM services, such as DS1 and DS3, interchangeably,[216] and because, at a certain point, differences in capacity become great enough

---

[211] Zarakas/Gately Decl. at Table 2.

[212] *Id.* ¶ 17, Table 2.

[213] *Id.* at Table 3.

[214] *See* Comments of AT&T Inc. at 13, WC Docket No. 05-25 (filed Jan. 19, 2010) (arguing that the Commission would be wasting time and resources in imposing regulations on TDM services that were "going the way of the dodo").

[215] Sprint Comments at 14.

[216] *Id.* at 15-16.

that consumers do not regard them as substitutes. Accordingly, the Commission must consider whether all services that offer similar capacities—*i.e.*, services that are in the same product market—are subject to effective competition and not whether a new underlying technology is available to market participants.

Thus, although some providers and customers are migrating from TDM to Ethernet and other packet-based technologies as such services become available, this is hardly a sign that the Commission should drop its examination of the TDM special access market. To the contrary, the ongoing technology transitions make it even more critical that the Commission complete the rulemaking and devise appropriate rules to prevent incumbent LECs from leveraging their market power in anticompetitive ways. For instance, the incumbent LECs' hold on low-capacity special access services allows them to prevent customers from switching to alternative suppliers—including competitors who offer faster, IP-based products.

As Sprint has previously explained, its own attempts to transition from legacy services to IP-based services illustrate how difficult it is to migrate and how the incumbents manage to use their market power in TDM services to forestall customers' transition to Ethernet.[217] Sprint undertook its own transition through its Network Vision program, where it planned a network-wide rebid of virtually all of its wireless backhaul system to try to attract entry from competitive special access providers. Yet, even with Sprint's relatively large network and substantial resources, Sprint could not manage to solicit competitive bids from non-incumbents for a number of its cell sites. Notably, many of the cell sites failed to procure any Ethernet bids, meaning that Sprint had to stay with TDM services from the incumbent LEC for its backhaul needs. In addition, even when it did switch to a competitive provider, Sprint incurred significant penalties

[217] Sprint Direct Case Opp. at 47-51; Sprint Comments at 55-57.

in its attempt to complete the transition—penalties incumbent LECs impose through loyalty mandates on purchasers trying to buy special access services from competitive providers.[218]

Ultimately, as one of the largest special access purchasers in the country, Sprint still could not attract sufficient competitive entry and was unable to successfully migrate to Ethernet in many places, thus maintaining its reliance on TDM services. Given the steep penalties Sprint was forced to absorb as a part of this all-out effort, it is unlikely that other special access purchasers could mount the type of campaign needed to accomplish such a transition. Other competitive LECs have also described the difficulty of transitioning from TDM services to Ethernet, noting that the incumbents' lock-up plans impose crippling shortfall penalties whenever purchasers do not meet previous volume commitments.[219] These volume commitments exclude Ethernet dedicated services purchases, which means that any carrier attempting to transition from TDM services to Ethernet would have to do so while shouldering the additional costs from the penalties.[220]

It is not only that purchasers cannot withstand such adverse conditions to switch to Ethernet—the point is that they should not have to. The fact that the incumbent LECs have put up these barriers to transition demonstrates that they have a dangerous amount of market power over TDM services and extensively utilize measures designed to protect it. The Commission

---

[218] These penalties are ongoing. Aside from early termination penalties, the effort to migrate away from reliance on TDM and ILEC provisioned backhaul has caused disqualification from the minimum commitments under loyalty plans. Sprint is now forced to pay the incumbent LECs' egregious rack rates for a substantial portion of its total monthly special access expense.

[219] Joint CLEC Comments at 46-48.

[220] *Id.*

therefore must act to ensure that competition can thrive in the special access market—otherwise, barriers to Ethernet transition will remain insurmountable for many purchasers of special access.

C. Even in the Context of Special Access to Towers, the Incumbent LECs Remain Dominant

Connecting cell towers to the Internet backbone via special access connections—in this context known as "wireless backhaul"—is a critical component of ensuring that customers have access to competitive wireless broadband services. Indeed, growth in demand for high-speed, 4G and soon 5G wireless broadband and other advanced services has made the need for competitive special access services more important than ever before.

Verizon incorrectly argues that the wireless backhaul "market" is an example of how competition is plentiful and why traditional special access services are no longer in need of regulation. Verizon claims that "this massive and ongoing surge in backhaul demand has enabled many new alternative providers and technologies to compete aggressively for this business, including cable operators, fiber-based CLECs, and fixed wireless providers."[221] This argument is just another attempt to obscure reality.

First, options for special access services to connect cell towers are as limited as options for special access services to connect buildings. Indeed, there is no difference between connecting a building and connecting a cell tower—both require the same dedicated special access connection and, therefore, are in the same product market.[222] As a leading wireless

---

[221] Verizon Comments at 51.

[222] Sprint Comments at 11; *see also* Comments of BT Americas Inc. at 23, WC Docket No. 05-25 (filed Jan. 19, 2010) ("Special access services used to connect cell towers to mobile operators' switching centers (*e.g.*, DS-1s) sit in the same product market as other equivalent special access services and should not be separated into a distinct product market. This was Ofcom's conclusion in the UK."); Sprint 2010 Comments at 15-16 (suggesting that special access services used for backhaul are identical to other special access services, except that the geographic markets in which backhaul services are supplied may be less competitive than

carrier, Sprint's own experience contradicts Verizon's claims that "competition for wireless backhaul is thriving."[223] As noted above, while Sprint's efforts to overhaul its backhaul system to its cell sites were primarily an attempt to move purchases away from incumbent LECs, Sprint often was forced to award a large number of new service agreements to incumbents anyway because there were simply no other competitive bids.[224] The reality is that for 73 percent of *all* locations, buildings or cell towers, incumbent LECs are the only facilities-based provider of DS1, DS3, or Ethernet-equivalent connections.[225] Verizon's claim that the competitive state of wireless backhaul is somehow wildly different than the rest of the special access marketplace is wrong.

Second, Verizon argues that wireless backhaul is now served by "many new . . . technologies" that "compete aggressively for this business."[226] But these "alternative technologies" that Verizon points to are cable and fixed wireless.[227] Just as the incumbents' assertions that cable has brought a flowering of competition to special access services in general are inaccurate, so too are their arguments that cable has a significant impact on connections to cell towers. As explained above, cable cannot offer meaningful competition in wireless backhaul without the extensive networks that incumbent LECs control.[228] As for fixed wireless, it has already been established that this technology, which has substantial disadvantages in line-of-

---

the geographic markets for other special access services, because many cell towers are located in remote geographic locations).

223 Verizon Comments at 51 (emphasis omitted).

224 Sprint Comments at 56.

225 Besen/Mitchell Decl. ¶ 26.

226 Verizon Comments at 51.

227 *Id.*

228 *See supra* Section V.A.

sight restrictions and limited range, does not act as a comparable substitute for wired special access services.[229] Despite the incumbent LECs' claims that there are numerous "alternatives" that serve as substitutes for special access services, the truth is that wireless carriers have no choice but to continue to purchase special access services for the bulk of their wireless backhaul needs from incumbents.

In light of the increased demand for wireless backhaul, it is more important than ever that the Commission work to protect competition in the special access marketplace. The consequences of this proceeding will have reverberations in other critical areas, such as the deployment of 5G mobile services and other technological advances, which are key priorities for this Commission.[230] These new services, which will benefit both businesses and consumers, will rely on the existence of competitive special access inputs to provide the necessary high-capacity backhaul.

VI. INCUMBENT LEC COMPLAINTS ABOUT THE DATA ARE AN EFFORT TO DIVERT ATTENTION AWAY FROM MUCH NEEDED SPECIAL ACCESS REFORM

Recognizing that the most comprehensive data collected in FCC history reveal the extent of their dominance of the special access marketplace, the incumbent LECs' next attempt is to undermine the data collection itself. For example, Verizon faults the Commission for failing to

---

[229] *See supra* Section III.A.1; *see also* Reply Comments of BT Americas Inc., Cbeyond Communications, LLC, EarthLink, Inc., Integra Telecom, Inc., Level 3 Communications, LLC, and tw telecom inc. at 20, WC Docket No. 05-25 (filed Mar. 12, 2013).

[230] *See, e.g.*, *Technology Transitions; Policies and Rules Governing Retirement of Copper Loops by Incumbent Local Exchange Carriers et al.*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 30 FCC Rcd. 9372 (2015) (repeatedly emphasizing the Commission's efforts to "further," "speed[]," and "advance" the IP transition "without delay"); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Notice of Proposed Rulemaking, 30 FCC Rcd. 11,878, ¶ 1 (2015) (seeking comment on "a regulatory framework that will help facilitate so-called Fifth Generation (5G) mobile services").

collect more than one year's worth of industry data and claims that the data the Commission has collected are too incomplete to be of any analytical use.[231] The Commission should reject these attempts to distract it from the overwhelming evidence of incumbent market power available in the current record.

First, Verizon claims that the Commission "originally found at least two years of data were necessary for key parts of the analysis."[232] This is incorrect. While the Commission noted that multiple years of data could help it control for factors "such as . . . building codes, climate, or soil quality" and assess potential competition, it did not conclude that two years of data was necessary for the central goal of the data collection: a traditional competition analysis.[233] In fact, the Commission explicitly stated that an analysis of "a time series of data" was just "[o]ne way" to evaluate potential competition.[234] Indeed, Verizon does not explain how historical data preceding 2013 would impact its own "forward-looking" assessment of potential competition, which relies on evidence purporting to show that suppliers in the "dynamic high-capacity marketplace" have very recently begun to expand competing offerings.[235] Nor does Verizon provide any plausible basis for believing that "building codes," "climate," "soil quality," or other such factors are driving the manifestations of incumbent market power reflected in the data.

Second, Verizon claims that the data set is "materially incomplete."[236] While no data collection could possibly cover all aspects of the special access marketplace, and Sprint also

---

[231] Verizon Comments at 14-19.

[232] *Id.* at 12.

[233] *2012 R&O and FNPRM* ¶ 28.

[234] *Id.* ¶ 29.

[235] *See* Verizon Comments at 12.

[236] *Id.* at 17.

could point to additional information that it would find useful, the data collection has provided more than sufficient data for the FCC to complete its task. The data capture a large majority of the marketplace and are much richer than the data the Commission used in the recent, court-approved *Qwest Order*.

Analysis of the collected data make clear that the likelihood that competitive LEC circuits with missing location information would create a false negative for the presence of effective competition in any particular location is exceedingly small, given how few locations benefit from the presence of multiple competitive providers. If anything, the incumbent LECs' own failure to comply with the Commission's data request means that incumbent dominance is even more extensive than the data suggest.

Verizon's complaint about the exclusion of last-mile cable facilities from the data set also fails, as these facilities are primarily used to supply best efforts broadband services to residential locations, which occupy a different product market than those relevant to this proceeding. And its remaining quibbles that the data could be more encyclopedic should be dismissed out of hand. The Commission has previously supported findings of market power without comprehensive information on presence, location, and revenue,[237] let alone multiple years of such data, and can certainly undertake the same analysis using the vastly superior record it has assembled in this proceeding.

VII. THE COMMISSION MUST ENACT INTERIM MEASURES AND LONG-TERM RELIEF TO INJECT COMPETITIVE CONDITIONS IN THE BROKEN SPECIAL ACCESS MARKETPLACE

The record demonstrates conclusively both that there is insufficient actual or potential competition in the special access marketplace in the vast majority of locations and that the

[237] *Qwest Order* ¶ 76.

incumbent LECs' attempts to obscure their dominance rely on false assumptions about consumer requirements and the feasibility of overbuilding incumbent last-mile facilities. The incumbent LECs also have failed in their attempts to undermine the most comprehensive data collection in FCC history. Despite the incumbent LECs' glaring omissions from the data request, the Commission's data set reliably establishes that the incumbent LECs wield extraordinary market power. This conclusion remains undisturbed by the garbled evidence the incumbent LECs offer in support of their annual argument that, this time around, competition *really is* just around the corner. Indeed, marketplace trends—including the growing need for wireless backhaul that the incumbent LECs themselves acknowledge—merely demonstrate the urgency with which the FCC must proceed as it begins the process of fixing the broken special access marketplace.

A. The Commission Must Adopt Immediate Measures to Help Spur Competition

The record reflects a consensus that the Commission must act immediately to spur wholesale and retail competition while it crafts longer term solutions designed to ensure that the rates, terms, and conditions of special access offerings are just and reasonable on a going-forward basis. For example, Ad Hoc proposes interim rate relief in pricing flexibility areas to mitigate the harms inflicted by the broken special access marketplace "pending a comprehensive update of the price caps rules."[238] The Joint CLECs similarly ask the Commission to (1) "jumpstart the process of bringing competition to the dedicated services marketplace" by declaring incumbent LEC lock-up plans unlawful, (2) bring all special access services, including price flex DSn and Ethernet services subject to granted petitions for forbearance, within the price cap regime and reduce the price cap index ("PCI") for special access services, and (3) undertake steps designed to prohibit price squeeze behavior, all before adopting a prospective X-factor on a

[238] Ad Hoc Comments at 14.

going-forward basis.[239] TDS Metrocom asks the Commission to take immediate action to combat price squeeze tactics by establishing a cap for wholesale Ethernet rates and adopting pricing disclosure requirements.[240] Windstream likewise proposes a number of remedies targeted at specific marketplace abuses that the Commission could adopt at this time.[241] As set forth below, Sprint agrees that the Commission can provide meaningful relief to the special access marketplace now and supports many of the interim measures proposed in this proceeding.

1. The Commission must adopt immediate remedies to address terms and conditions.

To remedy the harms caused by incumbent LEC loyalty and lock-up terms and conditions, Sprint proposes that the Commission (1) find such terms unenforceable and (2) offer competitive providers a "fresh look" to consider competitive alternatives in the few places they are available.

First, because the terms and conditions comprising incumbent LEC loyalty commitments allow incumbent LECs to preserve and expand their market dominance, Sprint urges the Commission to determine that these loyalty commitments are unenforceable—just as it has done in the past to dismantle other unjust and unreasonable exclusive dealing arrangements.[242] Sprint

---

239 Joint CLEC Comments at 65.

240 TDS Comments at 29-31.

241 Windstream Comments at 60, 63-64, 73-77, 82-83, 87-100.

242 *See, e.g.*, *Promotion of Competitive Networks in Local Telecommunications Markets Wireless Communications Association International, Inc. Petition for Rulemaking to Amend Section 1.4000 of the Commission's Rules to Preempt Restrictions on Subscriber Premises Reception or Transmission Antennas Designed to Provide Fixed Wireless Services et al.*, First Report and Order and Further Notice of Proposed Rulemaking in WT Docket No. 99-217, Fifth Report and Order and Memorandum Opinion and Order in CC Docket No. 96-98, Fourth Report and Order and Memorandum Opinion and Order in CC Docket No. 88-57, 15 FCC Rcd. 22,983, ¶¶ 1, 9 (2000); *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd. 20,235, ¶ 1 (2007); *Promotion of*

agrees with the Joint CLECs that "[a]ddressing this issue would jumpstart the process of bringing competition to the dedicated services marketplace by removing the artificial barrier to customer purchases of lower-priced competitive carrier dedicated services," and that the "resulting increase in sales would accelerate the deployment of fiber connections and fiber transport facilities, resulting in larger competitive carrier networks."[243]

Second, the Commission should suspend enforcement of incumbent LEC termination and portability penalties pending completion of its comprehensive reform effort. Doing so would serve to offer purchasers a "fresh look" at competitive alternatives—including Ethernet alternatives—in the few locations where competitive alternatives are available. This, too, is a remedy that the FCC has previously adopted in order to promote special access competition.[244] Although limited in scope because of the few geographic markets where competitive choice exists, a "fresh look" approach would create conditions more conducive to competitive entry in certain locations. As a result, the remedy would somewhat mitigate the incumbent LECs' ability to exploit a critical point of transition in the history of U.S. telecommunications networks to expand their dominance over the special access marketplace.

Competitive Networks in Local Telecommunications Markets, Report and Order, 23 FCC Rcd. 5385, ¶ 13 (2008) ("We find that immediately prohibiting the enforcement of such provisions is more appropriate than phasing them out or waiting until contracts expire and are replaced by contracts without exclusivity provisions."); *see also W. Union Tel. Co. v. FCC*, 815 F.2d 1495, 1501 (D.C. Cir. 1987) (The FCC can "modify . . . provisions of private contracts when necessary to serve the public interest.").

243 Joint CLEC Comments at 65.

244 *See Expanded Interconnection with Local Telephone Company Facilities*, Second Memorandum Opinion and Order on Reconsideration, 8 FCC Rcd. 7341, ¶¶ 3-41 (1993); *Expanded Interconnection with Local Telephone Company Facilities*, Memorandum Opinion and Order, 9 FCC Rcd. 5154, ¶¶ 197-208 (1994), *remanded on other grounds to Pacific Bell v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996) (limiting termination liabilities in current contracts on the grounds that "certain long-term special access arrangements may prevent customers from obtaining the benefits of the new, more competitive access environment").

2. The Commission must also immediately adopt remedies to reduce rates.

The data confirm that the incumbent LECs' dominance in the special access marketplace has enabled them to charge supracompetitive prices for special access services. To remedy the harm caused by these prices, Sprint urges the Commission immediately to revise the prevailing price cap regulations to reflect the current state of the special access marketplace. Specifically, the Commission should (1) bring all special access product markets within the price cap regime, including services previously granted pricing flexibility and those services that are not currently subject to dominant carrier regulation as a result of past Commission actions (or inaction); (2) adopt new "triggers" to identify areas that are subject to competition effective to restrain prices; and (3) craft an appropriate PCI. To ensure that rates charged to competitors are reasonable, the Commission should also make a one-time reduction in price caps to a level that ensures reasonable prices and then craft a going-forward X-factor.

First, the Commission should take the steps necessary to bring all special access products under price caps, including services currently subject to pricing flexibility and special access services provisioned by Ethernet or other IP-based technologies. The Commission should take this step immediately during the pendency of further reforms. Indeed, the Commission has already acknowledged that the pricing flexibility rules did not accurately identify areas subject to sufficient competition,[245] and the data now confirm that most locations in the U.S. do not benefit from effective competition.

The record also confirms that the current regulatory distinction between Ethernet and TDM services is an arbitrary one, and that the Commission's predictive judgments—and in some cases, *nonjudgments*—that competition would uniquely develop for Ethernet services have

[245] *2012 Suspension Order* ¶ 3.

proven to be incorrect. Moreover, as commenters have suggested, incumbent LEC market abuses, including price squeeze tactics and the imposition of competition-killing terms and conditions, are prevalent with respect to Ethernet special access service offerings and are significantly diminishing alternative providers' ability to compete.

Second, once the Commission adopts a reasonable method of identifying areas with competition sufficient to produce just and reasonable rates, terms, and conditions, it can determine the locations that are sufficiently competitive to warrant pricing flexibility.[246] Because the data confirm that these locations are few in number, the Commission can grant immediate relief in the vast majority of markets where there are only one or two competing providers while it develops criteria for determining the remaining locations that are, and are not, subject to effective competition. Indeed, the collected data may enable the Commission to quickly develop new triggers. For example, the Commission could perform regressions—like those performed by Dr. Baker—on the data it has today to help identify the number of providers necessary to produce competitive pricing in the special access marketplace. Notably, the Commission recognized that "an MSA is probably a much larger area than a competitor would typically choose to enter" when it suspended the application of the existing special access triggers.[247] The Commission may find that use of the building, as used by Dr. Baker in his regressions, provides a more accurate geographic measure of competitive entry. Indeed, Dr. Sappington suggests that the Commission can combine the data it has already collected with information on "location-specific entry barriers . . . to craft regulatory rules that are both administratively feasible and reasonably attuned to prevailing variation in competitive

---

[246] Joint CLEC Comments at 64; *see* Windstream Comments at 100.

[247] *2012 Suspension Order* ¶¶ 35-36.

conditions."[248]

Third, the Commission can draw from a number of resources to craft an appropriate PCI to act as a backstop against anticompetitive pricing behavior while still allowing market forces to determine specific prices and service offerings.[249] To initialize prices for all capacities of special access services, the Joint CLECs suggest that the Commission use either existing prices charged by competitive LECs or NECA Tariff 5 rates.[250]

As it has done in the past, the Commission should also make a one-time reduction in the PCIs to a level that ensures reasonable prices.[251] The Commission can do this immediately while it determines the best way to calculate a going-forward X-factor to govern the growth rate of special access services, thereby ensuring that incumbent LEC productivity savings from decreased costs or increased productivity are passed on to purchasers.[252] Indeed, as Dr. Sappington explains, it "is particularly important to revise the prevailing price cap regulation policy in a timely fashion to reflect industry developments in recent years," because "[c]onsumers have been harmed by" the "two decade[]" long "lag in revisiting the *X* factor."[253] The Commission should consider allowing incumbent LECs to submit cost studies to demonstrate that their costs exceed the rates set by regulation, which would enable the

---

[248] Sappington Decl. ¶ 27.

[249] Joint CLEC Comments at 65; *see also* Sappington Decl. ¶ 28.

[250] Joint CLEC Comments at 65-66.

[251] *Price Cap Performance Review for Local Exchange Carriers*, First Report and Order, 10 FCC Rcd. 8961, ¶ 246 (1995). The record is replete with evidence that the incumbent LECs routinely suppress broadband competition by imposing excessive wholesale rates and unreasonable conditions on their retail competitors. *See* Comments of Joint CLECs at 67; TDS Comments at 29-30; Comments of Windstream at 60; XO Comments at 56-57.

[252] *See* Joint CLEC Comments at 67.

[253] Sappington Decl. ¶ 28.

Commission to "re-start" the price cap regime quickly without fear of imposing undue hardship on the incumbent LECs.

As the Commission has concluded, "setting a reasonable target and requirement for LEC productivity is one of the critical tasks in ensuring that the price cap plan will work as intended."[254] The Commission should explore all available methodologies for updating the X-factor to reflect the productivity growth rates that the incumbent LECs are readily able to achieve. For instance, as explained by Dr. Sappington, the Commission could use the collected data to measure incumbent LEC outputs for 2013 as one input in an update of the X-factor.[255] The Commission could alternatively calculate an imputed X-factor based on changing prices of comparable services over time, using the data collection as one pricing point for such an analysis.[256] Other data that the Commission might use to impute an appropriate X-factor include inputs to historic Commission data reports (*e.g.*, ARMIS), posted tariff rates, competitor data, and/or cost models.

B. The Commission Should Explore Long-Term Reform Alternatives Designed to Reduce Supracompetitive Prices for Special Access Services

Though the measures outlined above will provide immediate relief to the special access marketplace, the Commission should explore whether alternative long-term regulatory regimes may more effectively govern special access prices, terms, and conditions in areas that are not subject to effective competition going forward.

Competitive Benchmarks. First, the Commission should explore the use of competitive

---

[254] *Policy and Rules Concerning Rates for Dominant Carriers*, Second Report and Order, 5 FCC Rcd. 6786, ¶ 75 (1990).

[255] Sappington Decl. ¶ 29.

[256] *Id.*

benchmarks to adjust prices for special access services in the vast majority of locations where competition does not constrain the incumbent LECs. The cable benchmarking rules are a useful starting point. Under the cable rules, a cable operator's rates were set at the rates that a cable operator facing effective competition would charge.[257] A cable company was allowed to exceed the benchmark rate only if it could make the case that its higher costs required higher rates.[258]

The Commission may be able to use the collected data to establish similar benchmarks. Specifically, the Commission could perform regressions like those presented in the Baker Declaration to identify geographic areas that are subject to price-disciplining competition.[259] The Commission could also establish the same flexibility in the special access context as it did when it implemented benchmarks for cable companies. By allowing an incumbent LEC to file cost studies demonstrating that its costs exceed the competitive benchmark prices for specific services and/or locations, the Commission could permit an incumbent LEC to charge higher prices when and where it is warranted.

---

[257] *Implementation of Section of the Cable Television Consumer Protection and Competition Act of 1992; Rate Regulation*, Report and Order and Further Notice of Proposed Rulemaking, 8 FCC Rcd. 5631, ¶¶ 183, 213 (1993).

[258] *Id.* ¶ 213. In order to ensure it was establishing the appropriate benchmark, the Commission would need to employ an appropriate measure of the "price" for the incumbent LEC's service. *See* Comments of Sprint Nextel Corporation at 12-16, WC Docket No. 05-25 (filed Feb. 11, 2013).

[259] Importantly, the observed prices in the data set contain statistical issues inherent with any special access pricing data. These issues—identified by Dr. Baker in conjunction with his regressions—are largely unavoidable and gathering additional data is unlikely to resolve many of these issues. For instance, impediments to competitive LEC expansion and the impact of incumbent LEC multi-year contracts and wholesale pricing policies would appear in any pricing data because these price-effecting conditions underlie all special access prices. The Commission would therefore need to adjust observed prices in the collected data set (or in any observed special access pricing data) to account for these issues.

Cost Models. The Commission should explore the use of cost models as a mechanism for establishing a long-term special access regulatory regime. Existing cost models demonstrate that current market prices for special access services are unreasonable.[260] For example, Windstream has submitted a cost model prepared by CostQuest that demonstrates the incumbent LEC prices for high-capacity special access services, including a reasonable rate of return.[261]

The Commission can use these cost models to develop price caps for special access services that do not face effective competition based on costs as computed by these models, including a reasonable return on investment. As with a potential benchmark remedy, the Commission can build flexibility into this remedy by allowing an incumbent LEC to submit cost studies to demonstrate that its costs exceed those identified in the study.

C. The Incumbent LECs' Request for Further Pricing Relief Must be Rejected

In the face of overwhelming evidence of entrenched and widespread incumbent market power and exorbitant prices for dedicated broadband services, the incumbent LECs nevertheless ask the Commission for relief from regulation.[262] The Commission plainly should reject these pleas to further deregulate the special access marketplace.

First, the incumbent LECs' claim that "existing pricing flexibility triggers are too conservative"[263] relies on the same fallacy that forms the heart of the incumbent LECs' erroneous market power analysis: the presence of just *one* competitor's facilities in *any* part of a census block necessarily means that the *entire* census block is subject to effective competition.

---

[260] Windstream Submission at 2.

[261] *See id.*

[262] AT&T Comments at 24-29; Verizon Comments at 68-69.

[263] AT&T Comments at 24; *see* Verizon Comments at 68 ("The record demonstrates that in each metropolitan area competitors are capable of and are serving the areas where demand is concentrated.").

Second, the incumbent LECs' claim that further deregulation would "accelerate" the IP transition is exactly backward.[264]

Through unchecked anticompetitive behaviors—including excessive wholesale pricing, exorbitant penalties, and onerous terms and conditions—the incumbent LECs are both limiting competitive providers' ability to supply alternatives to incumbent retail Ethernet services and ensuring that their dominance continues as the country completes its transition to all-IP networks.

Moreover, contrary to the incumbent LECs' claims, price cap regulation of TDM services would not "impede the transition to IP and deter competition and investment."[265] Price cap regulation merely functions as a backstop against supracompetitive pricing. It does not subsidize access to incumbent facilities, and therefore would not distort the overbuild decisions of competitive providers.

VIII. CONCLUSION

Despite rhetoric trumpeting vibrant and widespread special access competition, the incumbent LECs have failed to come forward with a single measure of actual competition in the special access marketplace. That, of course, should not come as a surprise. Numerous analyses now on the record demonstrate that the vast majority of locations with special access demand are served only by the incumbent, and that only a tiny percentage of locations benefit from more than one non-incumbent competitor.

The incumbents have failed to rebut this evidence of an uncompetitive special access marketplace. At best, they have offered a convoluted assessment of potential competition that

---

[264] Verizon Comments at 69.

[265] *Id.*

departs from established competition analysis principles. To create the illusion of potential competition, their analysis employs overly broad product and geographic markets, and makes implausible assumptions about the pro-competitive effects that a sole potential competitor can provide to a marketplace dominated by the incumbent. Fatally, the incumbent LECs' assessment ignores completely the substantial barriers preventing entry in the incumbent-dominated last mile.

Without a meaningful analysis of the Commission's data to offer, the incumbents are left to repackage the same argument they have made for years: that marketing materials and analyst statements so conclusively prove that special access competition is on the verge of developing that they effectively refute the entirety of the comprehensive data collection. Even if this evidence were as reliable as the comprehensive data the Commission has collected, it would show precisely the opposite of what the incumbents claim. It reveals that the fiber networks of cable companies and competitive LECs remain insignificant in comparison to those of the incumbent LECs, that cable companies and competitive LECs struggle to compete with incumbents because of the limited reach of their networks, and that these companies are resorting to partnerships rather than facilities-based construction to increase their reach. Indeed, this purported "evidence" actually documents the challenges that these providers face in attempting to build out their fiber networks, and describes the limited scope of these efforts as a result.

Now that the Commission can conclude with unprecedented confidence that the special access marketplace is not competitive and that the incumbents are using their market power to extract enormous rents from U.S. consumers, it must adopt remedies to promote special access competition as quickly as possible. These remedies must put an immediate end to incumbent lock-up tactics and provide immediate pricing relief in the many areas that lack effective

competition for all special access services, regardless of the technology used to provide them. After implementing these immediate steps to inject competition in the special access marketplace, the Commission should explore long-term solutions to ensure that incumbent pricing remains just and reasonable going forward.

Respectfully Submitted,

Charles W. McKee
Vice President, Government Affairs
Federal & State Regulatory
Chris Frentrup
Director, Senior Economist
Sprint Corporation
900 Seventh Street NW, Suite 700
Washington, DC 20001
(703) 433-3205

A. Richard Metzger, Jr.
Emily Daniels
Lawler, Metzger, Keeney & Logan, LLC
2001 K Street NW, Suite 802
Washington, DC 20006
(202) 777-7700

Paul Margie
Jennifer Bagg
Walter E. Anderson
V. Shiva Goel
Harris, Wiltshire & Grannis LLP
1919 M Street NW, 8th Floor
Washington, DC 20036
(202) 730-1300

Counsel for Sprint Corporation

February 19, 2016

REDACTED – FOR PUBLIC INSPECTION

ATTACHMENT 1
DECLARATION OF DAVID SAPPINGTON

ATTACHMENT E

REDACTED – FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593

DECLARATION OF DAVID SAPPINGTON

February 19, 2016

TABLE OF CONTENTS

I. INTRODUCTION

A. Qualifications

1. My name is David Sappington. I hold the titles of Eminent Scholar in the Department of Economics and Director of the Robert F. Lanzillotti Public Policy Research Center, both at the University of Florida.

2. Since earning my Ph.D. in economics from Princeton University, I have served on the faculties of the University of Michigan and the University of Pennsylvania and on the technical staff of Bell Communications Research. I have also served as the Chief Economist of the U.S. Federal Communications Commission ("the Commission") and as the President of the Industrial Organization Society. I presently hold positions on the editorial boards of five major journals, including the *Journal of Regulatory Economics*, the *RAND Journal of Economics*, and the *Journal of Economics and Management Strategy*.

3. My research focuses on the design and implementation of regulatory policy. I have published more than 150 articles in leading journals in the profession and have coauthored a book entitled *Designing Incentive Regulation for the Telecommunications Industry*. My curriculum vitae appears in Attachment A to this declaration.

B. Purpose of This Declaration

4. I have been asked by counsel for Sprint Corporation ("Sprint") to assess the extent of competition in the provision of special access services, as characterized by the evidence submitted in this proceeding. I have also been asked to consider the implications of my assessment for ongoing regulation of special access services.

5. My review of the record in this proceeding indicates that most census blocks are characterized by monopoly or duopoly supply of special access services. Even though fiber owned by competitive local exchange carriers ("CLECs") often transits a census block, CLECs are not employing the fiber to serve customers in most census blocks.

6. The record also indicates that this discrepancy between the presence of competitive fiber facilities and the actual competitive provision of special access services likely reflects, in part, substantial incremental costs of serving customers even after fiber is deployed nearby. The presence of such substantial costs is consistent with the evidence that the competitive presence that prevails in most locations does not compel incumbent suppliers to reduce significantly the prices they charge for special access services. Consequently, ongoing regulatory oversight of the provision of special access services is warranted to replicate the competitive discipline that is missing.

C. Outline of Declaration

7. The remainder of this declaration proceeds as follows. Section II reviews the disparate characterizations of competition that appear on the record and notes that economists representing incumbent local exchange carriers ("ILECs" or "incumbent LECs") do not support their assertion that the presence of nearby competitive fiber is sufficient to impose adequate pricing discipline on incumbent suppliers of special access services. Section III reviews important evidence on the record that contradicts this assertion of Drs. Israel, Rubinfeld, and Woroch ("the ILEC economists"), which may help to explain why the ILEC economists make little attempt to support their assertion. Section IV reviews the need to update regulatory policy, given the lack of evidence that competition is effectively disciplining the pricing of incumbent suppliers of special access services. Section V summarizes and concludes the declaration.

II. THE PARTIES PRESENT SHARPLY CONTRASTING ASSESSMENTS OF THE COMPETITIVENESS OF THE SPECIAL ACCESS MARKETPLACE

8. A primary role of regulation is to replicate the discipline of competitive markets when that discipline is lacking.[1] Consequently, the extent of industry competition is a critical consideration when designing regulatory policy. Relatively limited regulation typically is required if relevant markets exhibit substantial competition. More extensive regulation generally is appropriate if competition is limited or absent.

A. Parties Paint Highly Distinct Portraits of the Competitive Landscape

9. Participants in the present proceeding provide highly disparate characterizations of the extent of competition in the provision of special access services. Drs. Besen and Mitchell, for instance, report that the vast majority (more than 97 percent) of special access purchaser locations are characterized by monopoly or duopoly supply.[2] Drs. Besen and Mitchell further report that only about 2 percent of these locations are served by as many as three suppliers, and only about 1 percent are served by four or more suppliers.[3]

10. Drs. Besen and Mitchell also analyze supplier concentration in census blocks where special access services are provided. As Drs. Besen and Mitchell note, this analysis may well overstate the prevailing competitive discipline because it abstracts from the fact that a supplier that serves one location in a census block may not be able to serve other locations profitably in the block in a timely manner. Nevertheless, Drs. Besen and Mitchell observe that "the Merger

---

1 *See* Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions, Volume 1: Economic Principles* 17 (John Wiley & Sons, Inc. 1970).

2 Declaration of Stanley M. Besen and Bridger M. Mitchell ¶ 26, appended as Attachment 1 to Comments of Sprint Corporation, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Besen-Mitchell Declaration").

3 *Id*.

Guidelines characterize a market with an HHI above 2500 as 'Highly Concentrated,'" and find that "the HHIs in almost all (*i.e.*, more than 99 percent of) census blocks exceed this threshold, in most by a very substantial amount."[4] Drs. Besen and Mitchell conclude that "in the vast majority of special access product and geographic markets, the incumbent LECs do not face effective competition."[5]

11. In contrast, the ILEC economists report that "competitors have deployed sunk facilities in virtually every census block accounting for virtually all special access demand as measured by business establishments."[6] The ILEC economists interpret their findings as "evidence of abundant competition for special access services."[7]

B. The ILEC Economists Assert that Actual and Potential Competition Are Equivalent

12. These sharply contrasting assessments of the extent of competition in the provision of special access services differ primarily in the weight afforded to potential competition, as opposed to actual competition. Actual competition pertains to the interactions among suppliers that actually serve customers in the relevant geographic market. Potential competition refers to the activities of entities that could, in principle, profitably deliver service to customers in a

---

4 *Id.* ¶ 37. The "Merger Guidelines" denote U.S. DEP'T OF JUSTICE AND FED. TRADE COMM'N, *Horizontal Merger Guidelines* (Aug. 19, 2010), http://www.justice.gov/atr/horizontal-merger-guidelines-08192010 ("*Merger Guidelines*"). "HHI" denotes the Herfindahl-Hirschman Index, which is the sum of the squares of the market shares of all industry suppliers.

5 Besen-Mitchell Declaration ¶ 22.

6 Mark Israel, Daniel Rubinfeld, and Glenn Woroch, *Competitive Analysis of the FCC's Special Access Data Collection*, at 25 (dated Jan. 26, 2016), attached to Letter from Glenn Woroch, Professor of Economics, University of California, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Jan. 28, 2016).

7 *Id.*

timely manner, but presently do not serve the customers in question.

13. The ILEC economists focus on the mere presence of CLEC fiber investment. In contrast to Drs. Besen and Mitchell, the ILEC economists largely ignore the actual use of the fiber to serve customers. In doing so, the ILEC economists effectively assume that a competitive supplier that has deployed fiber in a census block can serve any customer located in that block at low incremental cost, and can thereby preclude incumbent suppliers from increasing prices above competitive levels.[8]

C. The ILEC Economists Fail to Meet Their Burden of Proof

14. In simply asserting that nearby CLEC fiber will effectively constrain ILEC pricing of special access services, the ILEC economists fail to meet the requisite burden of proof. The Commission has determined that:

> Evidence that present competitors have deployed limited amounts of fiber in a larger geographic area does not support a conclusion that those providers readily could offer wholesale services on a particular route, or that a potential entrant economically could deploy its own fiber on a particular route in a timely manner in response to a small but significant and nontransitory increase in the price of wholesale transport services.[9]

Similarly, the *Merger Guidelines* state that when they assess industry conditions, the U.S. Department of Justice and the U.S. Federal Trade Commission "will not presume that an entrant can have a significant impact on prices before that entrant is ready to provide the relevant

---

[8] The ILEC economists assert that "once a core network is in place, extending laterals requires a significantly smaller capital expenditure per unit of bandwidth, making this a relatively low-cost expansion. As a result, providers with nearby facilities impose an effective competitive constraint on ILEC special access services even if they are not yet actively serving a particular location …." *Id.* at 10.

[9] *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona, Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd. 8622, ¶ 78 (2010), *aff'd, Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

product to customers unless there is reliable evidence that anticipated future entry would have such an effect on prices."[10] The ILEC economists have not provided such evidence.

III. THE EVIDENCE DOES NOT SUPPORT THE ILEC ECONOMISTS' ASSERTION

15. This failure of the ILEC economists to support their assertion may seem surprising, given that their case is not at all compelling without the requisite evidence. A careful review of the record in this proceeding enlightens this failure. Industry experts explain why the mere presence of CLEC fiber should not be expected to impose adequate pricing discipline on incumbent suppliers of special access services. Econometric analysis also indicates that the CLEC presence that prevails in most locations does not compel incumbent suppliers to reduce significantly the prices they charge for special access services.

A. Industry Experts Identify Flaws in the ILEC Economists' Assertion

16. The declarations of industry experts identify the key flaws in the ILEC economists' assertion that fiber deployment implies effective competition in the provision of special access services. To illustrate, Mr. Carey from Sprint and Mr. Kuzmanovski from XO Communications describe many obstacles that a CLEC commonly encounters in attempting to supply special access services to a customer, even after the CLEC has deployed fiber in relatively close proximity to the customer's location.[11] Mr. Carey and Mr. Kuzmanovski note, for example, that a customer can only connect to a CLEC's fiber ring at a node or a splice point, which can be

---

[10] *Merger Guidelines* § 9.1.

[11] Declaration of Ed Carey ¶¶ 7-11, attached as Exhibit A to Opposition to ILEC Direct Cases of Sprint Corporation, WC Docket No. 15-247 (filed Feb. 5, 2016) ("Carey Declaration"); *see also* Draft Declaration of George Kuzmanovski ¶¶ 16-32, appended to Comments of XO Communications, LLC, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Kuzmanovski Declaration").

situated a considerable distance from the customer's location even if the customer is located directly on the ring.[12] Mr. Carey and Mr. Kuzmanovski further observe that the cost of constructing this connection can exceed ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL ***** which amounts to more than ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[13]

17. Additional costs of serving customers located close to an existing fiber ring can include the costs of new electronics, additional fiber, construction permits, rights-of-way fees, and the rent charged to house equipment at a customer's location. In some instances, building owners deny building access to new suppliers of special access services. Such denial can constitute an insurmountable entry barrier.[14]

18. The time required to obtain necessary permits, secure required rights of way, and construct new facilities also can hinder CLECs in their competition with ILECs. ILECs typically enjoy the distinct advantage of ubiquitous network deployment, reflecting their historic privileged position as monopoly suppliers of telecommunications services.

---

[12] *See* Carey Declaration ¶ 8; Kuzmanovski Declaration ¶ 24. In comments filed with the Commission in 2004, AT&T itself acknowledges that "[A] competitor may have fiber on a street, but if the nearest splice point on its facility is down the street at the next intersection, the additional distance … may render the investment uneconomical." Comments of AT&T Corporation at 33-34, WC Docket No. 04-313, CC Docket No. 01-338 (filed Oct. 4, 2004). AT&T also observes that "splice points on competitive networks are typically placed about 2,000 feet apart." *Id.* at 37.

[13] Carey Declaration ¶ 9; Kuzmanovski Declaration ¶ 25.

[14] As Mr. Kuzmanovski observes, ILECs often enjoy an important incumbency advantage in this regard. Due to their historic monopoly provision of telecommunications services, the ILECs have developed long-standing relationships with building owners and presently enjoy extensive building access. Kuzmanovski Declaration ¶ 8.

B. Econometric Analysis Does Not Support the ILEC Economists' Assertion

19. The ILEC economists' assertion that fiber deployment implies effective competition also receives little support from the findings of Dr. Baker.[15] Dr. Baker has conducted an econometric analysis of the data that the Commission has collected through its Special Access Data Request.[16] Specifically, Dr. Baker has examined the impact of actual and potential competition on the prices charged for special access services. Dr. Baker distinguishes between entities that actually serve customers in a specified location ("in-building providers") and entities that have deployed fiber in the proximity of the location ("nearby providers").[17]

20. In what he identifies as his "primary" regression,[18] Dr. Baker finds that the presence of two or three competing in-building providers (*e.g.*, the ILEC and one or two CLECs) has no statistically significant impact on the prices that ILECs charge for special access services. The presence of four or more in-building providers, though, is estimated to reduce these prices by approximately 12.35 percent.[19] In contrast, Dr. Baker estimates that the presence of four or more nearby providers reduces the prices that ILECs charge for special access services by

---

15 *See generally* Declaration of Jonathan B. Baker, attached to Letter from Jonathan B. Baker, Senior Consultant, FTI Consulting, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Baker Declaration").

16 *See generally Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Data Collection Protective Order, 29 FCC Rcd. 11,657 (2014).

17 Dr. Baker states that "A provider is considered nearby if it is not presently providing service to the customer location but has fiber within either the same census block or a census block with a boundary less than 0.5 miles away." Baker Declaration ¶ 43.

18 *See id.* ¶ 57, Table 2. The results of this primary regression are reported in column 1 of Table 2 in the Baker Declaration.

19 *Id.* This 12.35 (= 0.1 + 0.05 + 12.2) percent reduction is relative to the prices charged when the ILEC is the single provider of special access services to the location in question, holding other factors constant.

approximately 3.68 percent, which is less than one-third of the corresponding price reduction associated with the presence of in-building providers.[20] Dr. Baker concludes that "in-building providers provide a greater competitive constraint, on average, than nearby providers."[21]

21. The estimated difference in the impact of in-building competition and nearby competition is even more pronounced for certain particular types of special access services. In particular, Dr. Baker estimates that the presence of four or more in-building providers reduces the prices the ILECs charge for DS3 service by approximately 45.28 percent, whereas the corresponding price reduction associated with the presence of four or more nearby providers is only 2.33 percent.[22] Similarly, Dr. Baker estimates that the presence of four or more in-building providers reduces the prices that ILECs charge for Ethernet service with speeds of at least 1 gigabit per second by approximately 25.32 percent.[23] The corresponding presence of four or more nearby providers is associated with a 0.823 percent increase in ILEC prices.[24]

22. It should be noted that Dr. Baker's definition of nearby providers does not distinguish between providers that actually supply special access services to nearby customers and those that simply own nearby fiber. Therefore, the measured impact of nearby providers in Dr. Baker's

---

[20] *See id.* ¶ 63, Table 2. 3.68 = 1.37 – 0.22 + 0.93 + 1.60.

[21] *Id*. Table 3 in the Baker Declaration indicates that in-building and nearby competition may appear to have comparable effects on ILEC prices if all relevant differences among the prevailing forms of in-building and nearby competition are ignored. Table 2 demonstrates that these differences are, in fact, important to consider.

[22] The 45.28 percent reduction is the sum of the 12.2, 8.28, and 24.8 percent reductions reported in column 5 in Table 2 in the Baker Declaration. The 2.33 (= – 10.2 + 15.2 + 1.07 – 3.74) percent reduction reflects data from the same source.

[23] These conclusions reflect the entries in column 13 in Table 2 in the Baker Declaration. 25.32 = – 4.34 – 1.94 + 31.6.

[24] These conclusions reflect the entries in column 13 in Table 2 in the Baker Declaration. – 0.823 = – 5.81 + 6.83 – 2.65 + 0.807. Some other columns in Table 2 (*e.g.*, column 12) reflect different patterns.

study reflects the combined influence of actual suppliers and potential suppliers in the relevant census blocks.

23. The price data reported to the Commission have been questioned.[25] Furthermore, as is customary in econometric analyses, Dr. Baker does not report the results of all regression formulations that could conceivably be appropriate. Consequently, Dr. Baker's findings must be interpreted with care. However, these findings raise significant questions regarding the ILEC economists' assertion that any CLEC that has deployed fiber nearby can impose strong competitive discipline on an incumbent supplier of special access services. In fact, Dr. Baker's findings suggest that even the presence of one or two additional suppliers that actually provide service in the same building often fails to induce significant reductions in the prices that ILECs charge for special access services.[26]

C. Observed CLEC Activity Undermines the ILEC Economists' Assertion

24. The credibility of the ILEC economists' assertion that fiber deployment implies effective competition is also called into question by their failure to provide a compelling explanation for why so little CLEC fiber is actually employed to serve nearby customers. Drs. Besen and Mitchell report that "in fewer than 7 percent of the census blocks in which … at least one CLEC has fiber does any CLEC actually provide service to a purchaser."[27] Ms. Gately also cites the "striking disparity between the coverage of CLEC fiber routes and the actual locations where

---

[25] *See*, *e.g.*, Declaration of Susan M. Gately ¶ 17, appended to Comments of Ad Hoc Telecommunications Users Committee, WC Docket No. 05-25 (filed Jan. 28, 2016) ("Gately Declaration").

[26] *See* Baker Declaration at Table 2.

[27] Besen-Mitchell Declaration ¶ 30.

CLECs have been able to provide facilities-based connections to their customers."[28]

25. One wonders why CLECs that allegedly face low incremental costs of serving customers are, in fact, not serving these customers. One possible explanation is that, contrary to the ILEC economists' assertion, CLECs actually face substantial incremental costs of serving customers even after deploying fiber in nearby locations (for the reasons explained by Mr. Carey and Mr. Kuzmanovski, among others).[29] This explanation implies that the presence of nearby CLEC fiber often is inadequate to impose strong competitive pressure on incumbent suppliers of special access services. It is noteworthy in this regard that when they assess industry conditions, the U.S. Department of Justice and the U.S. Federal Trade Commission "consider the actual history of entry into the relevant market and give substantial weight to this evidence. Lack of successful and effective entry … tends to suggest that successful entry is slow or difficult."[30]

IV. IMPLICATIONS FOR FUTURE REGULATORY POLICY

26. The Commission deserves praise for its decision to undertake the comprehensive data collection required to determine the nature of the regulatory policy that will best serve consumers of special access services. The data the Commission has gathered reveal that the vast majority of census blocks are characterized by monopoly or duopoly supply of special access services. The data also reveal that CLECs own fiber that transits most census blocks where special access services are sold. However, the data do not provide compelling evidence that the mere presence of CLEC fiber is sufficient to drive the prices of special access services to competitive levels.

---

[28] Gately Declaration ¶ 12.

[29] Ms. Gately observes that "much of the fiber that has been deployed … is used for transport (aka middle mile) service – not last mile connections." *Id*.

[30] *Merger Guidelines* § 9.

Indeed, industry experts explain clearly why CLEC fiber deployment should not be expected to imply effective industry competition.

27. The data the Commission has collected are quite granular, so the Commission is now better able to determine where CLECs have deployed fiber and where they actually serve customers. Combining this information with information on node or splice locations, construction, permitting, and rights-of-way costs, and other relevant location-specific entry barriers should enable the Commission to craft regulatory rules that are both administratively feasible and reasonably attuned to prevailing variation in competitive conditions.[31]

28. It is particularly important to revise the prevailing price cap regulation policy in a timely fashion to reflect industry developments in recent years. A formal assessment of the proper *X* factor has not been undertaken in nearly two decades.[32] This lag in revisiting the *X* factor greatly exceeds the lag that commonly prevails under price cap regulation. Consumers have been harmed by this long lag to the extent that ILECs have been able to readily achieve productivity growth rates in excess of the (relatively low) rate of price inflation in recent years.

29. The data the Commission has collected may help to inform the updating of the *X* factor, the price levels at which to initiate the next phase of price cap regulation, and the appropriate number and composition of baskets of price-capped services. Alternatively, or in addition,

---

[31] Demographic data (*e.g.*, the density of business locations) may also be useful in this regard.

[32] The Commission formally updated the *X* factor in 1997, and then effectively set *X* equal to the economy-wide rate of price inflation in 2000. *See generally Price Cap Performance Review for Local Exchange Carriers*, Fourth Report and Order in CC Docket No. 94-1 and Second Report and Order in CC Docket No. 96-262, 12 FCC Rcd. 16,642 (1997); *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long-Distance Users; and Federal-State Joint Board on Universal Service*, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, and Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd. 12,962, ¶¶ 135-137, 183-184 (2000).

Automated Reporting Management Information System ("ARMIS") data might be employed to help ensure a timely updating of the price cap plan. The ILECs have not been required to report ARMIS data to the Commission in recent years. However, the ILECs are required to collect relevant data,[33] so they can now make it available to the Commission in expedient fashion.[34]

V. CONCLUSIONS

30. My review of the evidence on the record in this proceeding indicates that most census blocks are characterized by monopoly or duopoly supply of special access services. Even though fiber owned by CLECs often transits a census block, CLECs are not employing the fiber to serve customers in most census blocks. The record also provides evidence that refutes the assertion of the ILEC economists that the mere presence of CLEC fiber implies that effective competition prevails in the provision of special access services. The contradictory evidence may explain why the ILEC economists make little attempt to support their assertion.

31. In the absence of evidence that incumbent suppliers of special access services face effective competition, ongoing regulatory oversight of the industry is prudent. The prevailing

---

[33] The Commission has required each relevant carrier to "'maintain its accounting procedures and data in a manner that will allow it to provide usable information on a timely basis if requested by the Commission.'" *Petition of USTelecom for Forbearance Under 47 U.S.C. § 160(c) from Enforcement of Certain Legacy Telecommunications Regulations*, Memorandum Opinion and Order, Report and Order, Further Notice of Proposed Rulemaking, and Second Further Notice of Proposed Rulemaking, 28 FCC Rcd. 7627, ¶ 68 (2013) (quoting *Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160 from Enforcement of Certain of the Commission's Cost Assignment Rules*, Memorandum Opinion and Order, 23 FCC Rcd. 7302, ¶ 31 (2008) ("*AT&T Cost Assignment Forbearance Order*)). The Commission did so because it foresaw the potential "'need for this accounting information in the future to adjust our existing price cap regime or in our consideration of reforms moving forward.'" *Id*. (quoting *AT&T Cost Assignment Forbearance Order* ¶ 19).

[34] Once the key parameters of price cap regulation have been updated to reflect prevailing industry conditions, the Commission might develop additional cost models to inform future re-prescriptions of the *X* factor.

price cap regulation policy, which has not been thoroughly re-examined in nearly two decades, should be updated to reflect prevailing industry conditions. After this updating has been completed to ensure the timely protection of customers of special access services, the Commission can continue its commendable policy of acquiring the information it needs to structure policies to reflect prevailing industry conditions.

VERIFICATION

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Executed on February 18, 2016.

David Sappington

ATTACHMENT F

HWG | HARRIS, WILTSHIRE & GRANNIS LLP

March 24, 2016

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Special Access for Price Cap Local Exchange Carriers; WC Docket No. 05-25, RM-10593

Dear Ms. Dortch:

The Commission has now completed the most comprehensive data collection in the agency's history and received thousands of pages of comments detailing the extensive and long-held market power that the incumbent local exchange carriers ("ILECs") wield over the broken special access marketplace. In response to now conclusive evidence of their dominance, the ILECs ask the Commission to ignore the dearth of special access competition on the promise that cable providers have upended the special access marketplace and will soon emerge as fierce competitors to ILEC special access[1]—just as they have done all along in the more than a decade since the Commission initiated this proceeding.[2] The Commission should reject these renewed efforts to stall the reforms necessary to unleash broadband competition at a critical point of transition in our nation's wireline and wireless infrastructure.

---

1 *See, e.g.*, Letter from Christopher Shenk, counsel for AT&T, to Marlene H. Dortch, Secretary, FCC, at 6-8, WC Docket No. 05-25 (filed Mar. 21, 2016) ("Mar. 21 AT&T Ex Parte"); Comments of AT&T at 13-15, WC Docket No. 05-25 (filed Jan. 27, 2016) ("AT&T Comments"); Letter from Maggie McCready, Verizon, to Marlene H. Dortch, Secretary, FCC, at 2-3, WC Docket No. 05-25 (filed Mar. 1, 2016) ("Mar. 1 Verizon Ex Parte"); Comments of Verizon at 28-30, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Verizon Comments"); *see generally* Letter from Melissa E. Newman, CenturyLink, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (filed Mar. 17, 2016).

2 *See, e.g.*, Comments of Verizon at 28, WC Docket No. 05-25 (filed June 13, 2005) ("2005 Verizon Comments") ("Cable broadband can substitute directly for traditional private line services used by small and medium businesses, and cable operators aggressively are extending their fiber to the premises of office buildings."); Comments of AT&T at 18, WC Docket No. 05-25 (filed Aug. 8, 2007) ("2007 AT&T Comments") (proclaiming that "competition provided by cable operators has dramatically intensified over the past two years," predicting steep losses in "retail DS1 circuits . . . to cable service providers" as a result of fiber and "hybrid fiber-coaxial cable facilities"); *see also* Letter from Dee May, Verizon, to Marlene H. Dortch, Secretary, FCC, at Attachment D p.6 (filed Sept. 5, 2007) ("2007 Verizon Ex Parte").

The latest ILEC attempt to position cable providers as potential competitors that will discipline prices sometime in the near future fails for three primary reasons. *First*, contrary to the predictions made by the ILECs in this proceeding, cable fiber networks, and those of competitive local exchange carriers ("CLECs"), remain small in size and reach. While these networks provide limited choice to businesses in some locations, they do not provide effective competition in the vast majority of locations in the United States. As discussed below, marketplace trends since 2013 merely confirm this fact. They show that competitive providers, bogged down by entry barriers and classic overbuild economics, are expanding their fiber networks too selectively and slowly to create competitive conditions in the special access marketplace in the foreseeable future.

Second, despite significant advancements in standards technology for hybrid fiber-coaxial ("HFC") data transmission with the introduction of DOCSIS 3.0, the ILECs' more than decade-old prediction that cable HFC networks would bring effective competition to the special access marketplace also has turned out to be incorrect. At present, Ethernet over HFC ("EoHFC") services are not available to every business location, including many in proximity to cable companies' traditionally residential footprint, nor to most wireless towers. Importantly, even where access is available, EoHFC cannot substitute for special access ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****. Indeed, ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****.

Third, even assuming that EoHFC services improve in capacity and eventually reach ubiquitous deployment, they would not bring effective competition to the special access marketplace. As cable companies upgrade their HFC networks, demand for bandwidth-intensive and performance-sensitive applications will continue to increase. More importantly, even if the capabilities of HFC networks managed to catch up to, and keep pace with, the requirements of each and every special access consumer, and even if cable providers managed to overbuild the footprint of each and every ILEC with HFC, there would still be a duopoly at 90 percent of locations with special access demand. Having already concluded that an *actual* duopoly does not support the vibrant competition necessary to bring efficient pricing and innovative services to telecommunications markets, the Commission cannot conclude that a hypothetical—and, indeed, unobtainable—special access duopoly adequately constrains ILEC rates, terms, and conditions.

I. Cable Fiber Networks are Limited in Reach and Slowly Expanding.

Since the beginning of this proceeding, the ILECs have asserted that "cable operators aggressively are extending their fiber to the premises of office buildings," and offered these efforts as proof of imminent special access competition.[3] The ILECs pointed to CLEC fiber collocations, and modest CLEC inroads in a handful of ILEC-dominated MSAs, to buttress these

[3] 2005 Verizon Comments at 28.

claims.[4] More than ten years ago, the ILECs submitted news reports and advertisements to document the "ambitious plans" of these would-be competitors.[5] They even directed the FCC to cable company "web sites" for smoking-gun evidence of thriving competition—like Cox Communications' assertion that it was an "ideal communications partner."[6]

The ILECs' thinly supported predictions proved incorrect. Despite years of expansion efforts by competitive providers, both cable operators and CLECs have managed to introduce effective competition to only a tiny fraction of the special access marketplace. As the Commission's data collection demonstrates, ILECs remain the sole provider of special access in 73 percent of customer locations.[7] There is a duopoly at 24 percent of locations, and three competitors at 2 percent of locations, leaving fewer than 1 percent of locations with four or more competitors. A duopoly is not sufficient to discipline incumbent rates, terms, and conditions.[8] To be clear, these results account for the fiber networks of both CLECs and cable companies,[9] with cable companies serving roughly 58 percent of the limited locations where a competitive provider offers service.[10]

Confronted by data disproving their initial predictions, the ILECs simply lather, rinse, and repeat. The ILECs insist that the moment marketplace participants pressed "submit" on the Commission's data collection portal, competitive dynamics intensified drastically, to the point where cable and CLEC fiber networks *really are* on the verge of transforming the special access marketplace. There is no more reason to believe these claims now than there was in 2005. Indeed, today's ILEC evidence is strikingly similar to the evidence they submitted in 2005—and equally flimsy.

---

4 *Id.*

5 *Id.* at 29.

6 *Id.*

7 Declaration of Stanley M. Besen and Bridger M. Mitchell ¶¶ 25, 26 & Table 1, appended as Attachment 1 to Comments of Sprint Corporation, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Besen/Mitchell Decl.").

8 *Id.*

9 Supplemental Declaration of William P. Zarakas ¶¶ 2-3 (dated Mar. 23, 2016), attached hereto as Attachment A ("Supplemental Zarakas Decl.").

10 *Id.* ¶ 7.

First, as Sprint has explained previously,[11] the ILECs' new collection of curated news reports, advertisements, and websites concerning the "ambitious"[12] plans of competitive providers hardly indicates that cable companies and CLECs will suddenly emerge as rivals across the ILECs' collective footprint. To the contrary, they corroborate the substantial record evidence[13] that insurmountable barriers to competitive entry typify the special access marketplace. For example, numerous reports cited by the ILECs indicate that cable companies' fiber expansion efforts are limited in scope to certain "communities" and "business districts," and that cable companies increasingly resort to non-facilities-based expansions as a result of the time and cost associated with overbuilding ILECs even in dense locations.[14] Along the same lines, a news report about XO Communications ("XO") cited by Verizon discusses how a "$500 million" XO fiber deployment initiative resulted in "completed fiber construction projects" in just "550 enterprise buildings."[15] At that pace, it would take generations to expand XO's fiber

---

[11] *See generally* Reply Comments of Sprint Corporation at 20-38, WC Docket No. 05-25 (filed Feb. 19, 2016) ("Sprint Reply Comments"); Sprint Corporation Opposition to ILEC Direct Cases at 9-15, WC Docket No. 15-247 (filed Feb. 5, 2016) ("Sprint Direct Case Opposition").

[12] Brief of AT&T Inc. in Support of Its Direct Case at 7 n.17, WC Docket No. 15-247 (filed Jan. 8, 2016) (discussing Birch Communications' "ambitious goal" to expand its fiber presence) ("AT&T Direct Case"); *see also id.* at 7, 12-13; Verizon Comments at 32-33.

[13] *See, e.g.*, Reply Comments of Birch, EarthLink, and Level 3 at 4-11, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Joint CLEC Reply Comments"); Sprint Reply Comments at 20-38; Sprint Direct Case Opposition at 9-15.

[14] *See* Verizon Comments at 31 n.83; *see also* AT&T Direct Case at 7 and Letter from John W. Mayo, Georgetown Center for Business and Public Policy, to Marlene H. Dortch, Secretary, FCC, at attachment p. 8, WC Docket No. 05-25 (filed Mar. 15, 2016) (each citing Sean Buckley, *Birch's Oddo: We'll Expand our Fiber Network to 1M Buildings via Organic Builds, Partner Agreements*, FierceTelecom (Dec. 2, 2015), http://www.fiercetelecom.com/story/birchs-oddo-well-expand-our-fiber-network-1m-buildings-organic-builds-partn/2015-12-02 (conceding that "building our own fiber network" is a "long process" and that Birch will "leverage existing relationships" and expand "relationships with other fiber owners" to reach more customers in dense urban areas)).

[15] *See* Direct Case of Verizon at 20, WC Docket No. 15-247 (filed Jan. 8, 2016) ("Verizon Direct Case") and Letter from Curtis Grove, Verizon, to Marlene H. Dortch, Secretary, FCC, at 5, WC Docket No. 05-25 (filed Sept. 24, 2015) ("Sept. 24 Verizon Ex Parte") (citing Sean Buckley, *XO Takes Success-Based Approach to On-Net Fiber Buildouts*, FierceTelecom (Sept. 3, 2015), http://www.fiercetelecom.com/story/xo-takes-success-based-approach-net-fiber-buildouts/2015-09-03); *see also* Letter from Thomas W. Cohen, counsel for XO Communications, to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket No. 05-25 (filed Sept. 23, 2015) (citing the same report, and suggesting that despite these efforts "XO's network facilities cannot reach all locations where it seeks to serve customers" and must rely "heavily on the facilities and services of the price cap LECs").

network from its existing reach of "4,000 on-net buildings"[16] to a number that even remotely approximates a meaningful share of the nearly 950,000[17] locations served only by an ILEC—unless, of course, an ILEC acquired XO first. These reports also undermine the ILECs' own competitive analyses, which incorrectly assume that competitors will soon be able to supply special access services at any business location located anywhere near a competitor's fiber optic cable, even if there is no connection point anywhere in the area, and even if it would cost more to build the connection than a business would ever want to pay.[18] Like the flawed rationale for the now-suspended collocation-based pricing flexibility triggers, these analyses ignore the enormous barriers to last-mile overbuilds in many locations throughout the country—rural, suburban, and urban alike.

Second, the ILECs purport to establish surging growth in cable special access by quoting figures about expansions in cable facilities that are not used to provide special access services at all. For example, Verizon refers to an announcement about the addition of commercial buildings to Time Warner Cable's coaxial network.[19] As Time Warner has stated on the record, it does not supply special access services over coaxial lines.[20] The ILECs' assumption that all businesses in proximity to cable coaxial networks have access to a substitute service for special access relies on the same mistaken prediction made years ago[21] that cable modem offerings would soon emerge as ubiquitous and fully competitive with special access services. As explained below, this prediction also has been disproven, and there are no grounds to conclude that it has suddenly gained merit now.

II. EoHFC Services are not Fully Competitive with Special Access Services.

The majority of services that cable companies offer are comprised of Ethernet over coaxial or HFC. Cable coaxial networks historically have been used to provide video services and broadband access to residential customers. The efforts of cable companies to build fiber

---

16 XO COMMUNICATIONS, LLC, *Network Reach*, http://www.xo.com/why/the-right-network/reach/.

17 Supplemental Zarakas Decl. ¶ 6.

18 *See, e.g.*, AT&T Comments at 3; Verizon Comments at 30.

19 Reply Comments of Verizon at 2, 22, WC Docket No. 05-25 (filed Feb. 19, 2016) ("Verizon Reply Comments").

20 *See* Letter from Matthew Brill, counsel for Time Warner Cable, to Marlene H. Dortch, Secretary, FCC at 2, WC Docket 05-25 (filed Mar. 3, 2016) ("TWC Ex Parte") (HFC Internet access service is "not a dedicated Internet access service, but rather a best efforts service that operates over a shared network"); *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***.

21 *See, e.g.*, 2005 Verizon Comments at 24, 28; 2007 AT&T Comments at 18; Reply Comments of Verizon at 33-35, WC Docket No. 05-25 (filed Aug. 15, 2007) ("2007 Verizon Comments"); 2007 Verizon Ex Parte at Attachment D p.6.

from the headend to the fiber node and extend coaxial to some business locations within their footprint, combined with advancements in data-over-coaxial standards and equipment, have resulted in the offering of Ethernet and broadband access services delivered over HFC. Where available, these HFC services provide a meaningful alternative to copper- and fiber-based best efforts services that enterprise customers have purchased for years.[22] These services, however, fall short of providing meaningful competition to ILEC *special access* services in numerous respects.

First, EoHFC is not yet available in all business locations served by ILEC special access—nor at most cellular tower sites.[23] While cable companies have expanded their coaxial networks, a significant number of buildings located both in and outside the cable footprint continue to lack access to last-mile coaxial facilities. Newer commercial buildings with fiber, retailers surrounded by large parking lots, large business locations set back far from roadways, airports, malls, and other locations often lack a coaxial connection.[24] Indeed, cable companies themselves have acknowledged that their networks lack the extensive reach necessary to compete with ILECs.[25] Moreover, as with fiber, constructing coaxial facilities to these previously unserved locations can prove prohibitively costly and time-consuming, even in dense urban and suburban areas that comprise a large portion of the cable footprint. The costs of construction, the need to obtain permitting, rights of way, and other permissions, and the limited revenue available at the customer location—particularly in light of the lower price consumers are willing to pay for HFC services—can make extending EoHFC to unserved businesses uneconomic.[26]

---

[22] Indeed, Verizon's latest advertisements for its FiOS service tout the advantages of fiber relative to cable HFC offerings even for residential broadband services.

[23] *See* Second Declaration of Ed Carey ¶ 7 (dated Mar. 24, 2016), attached hereto as Attachment B ("Second Carey Decl.").

[24] *Id.*

[25] *See* Opposition to Petitions to Deny and Response to Comments of Comcast Corporation and Time Warner Cable Inc. at 70-71, MB Docket No. 14-57 (filed Sept. 23, 2014) ("Because larger businesses and enterprise customers have locations spanning multiple areas and cable footprints, Comcast, TWC, and other cable companies have been unable to offer seamless business service option," and cannot provide "meaningful competition against incumbent providers"); Public Interest Statement of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership at 35-36, MB Docket No. 15-149 (filed June 25, 2015) (noting that "a provider typically must have a broad regional footprint without significant gaps in coverage areas to serve large enterprises with multiple sites across given geographic regions effectively.").

[26] *See* Jon Brodkin, *Comcast failed to install Internet for 10 months then demanded $60,000 in fees: Tech startup needs a new office because it can't get Comcast Internet*, Ars Technica (Mar. 17, 2016), http://arstechnica.com/business/2016/03/comcast-failed-to-install-internet-for-10-months-then-demanded-60000-in-fees/ (after 10 months of attempting construction, cable company halted efforts to extend lateral to startup business in the heart of Silicon Valley, due in part to limited recurring revenue associated with HFC service); *see also* Sprint Reply Comments at 20-38; Sprint Direct Case Opposition at 9-15.

Sprint has *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[27]

Second, HFC services are currently limited in capacity to 10 Mbps.[28] While these capacities *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***.[30] Because of bandwidth limitations alone, HFC services represent an insignificant constraint on pricing for the Ethernet services purchased by Sprint. Indeed, over *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[31]

Third, *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted]

---

27 *See* Second Carey Decl. ¶ 12; *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***; *see also* *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted]. *** **END HIGHLY CONFIDENTIAL** ***

28 *See* Second Carey Decl. ¶ 8; Mar. 21 AT&T Ex Parte at 10; *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***

29 *See, e.g.*, 2007 Verizon Ex Parte at Attachment D p.6.

30 Second Carey Decl. ¶¶ 8-9.

31 *Id.* ¶ 8.

32 *Id.* ¶¶ 9-11; *see also* *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***

33 Second Carey Decl. ¶¶ 9-11.

[redacted]
*** **END HIGHLY CONFIDENTIAL** ***

While some cable companies *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[36]

Despite *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[37] This does not suggest, as the ILECs have claimed, that special access will soon become obsolete. First, the customers for whom these services *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[38] Second, Sprint is increasingly confronting situations where *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** *** For these customers, the purchase of enterprise communications services supported by an EoHFC connection hardly reflects a technology-driven increase in special access competition. To the contrary, it reflects the deadweight loss created by inefficient monopoly pricing in the dedicated broadband marketplace.

---

34 *Id.*

35 *Id.* ¶ 13.

36 *Id.*

37 *Id.* ¶¶ 12, 14.

38 *Id.* ¶¶ 9-11; *see also* Reply Comments of TDS Metrocom, LLC at 17-18, WC Docket No. 05-25 (filed Feb. 19, 2016) ("TDS Reply Comments") (HFC only appropriate for "very small" businesses with "fewer than 10 employees" that do not "depend on cloud-based back office services").

39 Second Carey Decl. ¶ 14.

Sprint's experience with EoHFC services is consistent with reports from cable providers. As cable companies acknowledge, many businesses continue to purchase fiber-based services, or both HFC and fiber-based services, to the point where cable companies *themselves* do not consider HFC networks a substitute for fiber networks, and will analyze buildout economics for each network separately.[40] Moreover, while Verizon and *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** *** assert that they have responded to HFC offerings with *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[41] neither company mentions that they have reduced *special access* pricing in response to the availability of HFC. Indeed, the claim that dedicated services are no longer in demand cannot be squared with evidence provided by cable companies showing that *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***[42]

III. Even Assuming Improvements in Performance and Availability, HFC Services Will Not Bring Effective Competition to the Special Access Marketplace.

As the Commission evaluates the impact of HFC services on the special access marketplace, Sprint urges it to recognize the many ways HFC services have fallen short of the lofty expectations set by the ILECs earlier in this proceeding. Moreover, in evaluating the potential of these services to increase special access competition in the future, Sprint urges the Commission to treat with skepticism the claim that HFC services will one day deliver higher capacity services—a capability that, in any event, would take years to achieve.[43] To appropriately weigh the importance of HFC network availability to special access competition, the Commission must also consider (1) demand-side increases in capacity and quality of service requirements, and (2) the likelihood that an increase in the availability and uptake of HFC services would in fact generate effective competition to ILEC special access in most locations.

First, even with improvements in speed and capacity, HFC networks may not be capable of meeting the increasing demands of enterprise connectivity. Sprint's enterprise customers

---

[40] TWC Ex Parte at 4 (TWC "undertakes essentially the same build analysis" that it employs for its fiber networks "if a potential business services customer requests a DOCSIS-based service at a location that is not reached by TWC's HFC network."); *see also* *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***

[41] Mar. 1 Verizon Ex Parte (describing its unpublicized "Titan" program); *see also* *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***

[42] TWC Ex Parte *** **BEGIN HIGHLY CONFIDENTIAL** *** [redacted] *** **END HIGHLY CONFIDENTIAL** ***

[43] *See id.* at 2 n.2 (describing ongoing upgrade of networks to DOCSIS *3.0*).

increasingly require services that can support HD video, interactive applications, and a larger number of connected devices, each consuming greater amounts of data than before.[44] These applications not only require more bandwidth, but are also much more sensitive to latency and jitter. Because wireless usage is experiencing the same trends, Sprint has no assurance that HFC networks will ever grow capable of ***** BEGIN HIGHLY CONFIDENTIAL ***** [redacted] ***** END HIGHLY CONFIDENTIAL *****[45]

Second, as explained in the Dr. Zarakas's attached Declaration, even assuming that HFC become available at every location where an ILEC provides service, the result would be a duopoly in the vast majority of locations with special access demand—specifically 90 percent of them. Only 9.3 percent of all locations would benefit from three providers, with four or more in just 0.5 percent.[46] Similar results persist using larger geographic areas: there would be a duopoly in 86 percent of census blocks where special access services are provided, three competitors in 12 percent of census blocks, and four or more competitors in just 2 percent.[47] By assuming that HFC services are available at every location served by an ILEC, the Zarakas analysis, for the sake of argument, significantly overstates the potential reach of coaxial networks. It also overstates the competitive impact of HFC services by assuming that every special access purchaser—including wireless carriers—can substitute HFC for traditional special access, which is not, and likely never will be the case.[48] As the cable companies acknowledge, both of these assumptions are highly improbable.[49]

An unrealistic, best-case scenario of a distant business broadband duopoly should not deter the FCC from proceeding with essential special access reform today. Indeed, considerable Commission precedent establishes that duopolies cannot provide effective competition. In the *Qwest Forbearance Order*, the Commission rejected the assumption "that a duopoly always constitutes effective competition and is necessarily sufficient to ensure just, reasonable, and nondiscriminatory rates."[50] It determined that the AT&T-T Mobile merger would not serve the public interest largely on the basis that a 4-to-3 competitor transaction would diminish wireless competition and harm consumers.[51] In establishing its spectrum screen, the Commission presumed that fewer than three strong competitors in a given geographic market would result in

---

[44] Second Carey Decl. ¶ 15.

[45] *Id.*

[46] Supplemental Zarakas Decl. ¶ 9.

[47] *Id.* ¶ 10.

[48] Second Carey Decl. ¶¶ 9, 10, 13, 15.

[49] *See supra* nn.25, 40, 41, 42 & accompanying text.

[50] *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd 8622, 8635-36 ¶ 29 (2010), *aff'd, Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

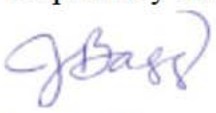
[51] *See Applications of AT&T Inc. and Deutsche Telekom AG For Consent to Assign or Transfer Control of Licenses and Authorizations*, Order, 26 FCC Rcd. 16,184, 16,185 ¶ 3 (2011).

inadequate competition.[52] Similarly, under the Cable Television Consumer Protection and Competition Act, the Commission relied on evidence that the vast majority of consumers were served by at least three MVPDs before adopting a presumption of effective competition for cable franchises.[53] And in this very proceeding, the Commission suspended archaic pricing flexibility triggers based on the presence of a single competitor's collocated facilities,[54] squarely rejecting any implication that the presence of "sunk facilities by [just] one competitor [is] sufficient to prevent the incumbent from engaging in anticompetitive behavior."[55] As explained by Drs. Besen and Mitchell in this proceeding, numerous economic studies support the Commission's past conclusions.[56] Thus, the ILECs' last-gasp attempt to retain their monopoly rents by repeating their ten-year old HFC predictions fails to establish the existence of effective actual or potential special access competition.

* * *

The data collection and the record evidence in this proceeding confirm that ILECs do not face meaningful, effective competition in the provision of special access services. Cable companies and CLECs have not closed the gap in the ten-plus years this proceeding has been active, nor is there any indication they will do so in the foreseeable future. Accordingly, the Commission should reject the ILECs' arguments and push past these tired stall tactics. The Commission should expeditiously issue an order that includes a finding of ILEC market power and adopts interim measures on rates, terms and conditions that address the competitive harms that have arisen as a result of ILEC dominance. The Commission should then implement a permanent regime governing ILEC prices and practices that will comprehensively reform the broken special access marketplace.

Respectfully submitted,



Jennifer Bagg
Paul Margie
Walter Anderson
V. Shiva Goel
Counsel to Sprint Corporation

---

52 *See Policies Regarding Mobile Spectrum Holdings Expanding the Econ. & Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6133, 6228 ¶ 247 (2014).

53 *See Amendment to the Commission's Rules Concerning Effective Competition, Implementation of Section 111 of the STELA Reauthorization Act*, Report and Order, 30 FCC Rcd. 6574, 6577 ¶ 4 (2015).

54 *Special Access for Price Cap Local Exchange Carriers*, Report and Order, 27 FCC Rcd 10,557, 10,563 ¶ 11 (2012).

55 Mar. 21 AT&T Ex Parte at 4.

56 *See* Besen/Mitchell Decl. ¶¶ 43-47.

ATTACHMENT G

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	
	)	
Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans	)	WC Docket No. 15-247

Supplemental Declaration of William P. Zarakas

1. My name is William P. Zarakas. I am a Principal with The Brattle Group, an economics consulting firm, where I work primarily on economic and regulatory matters concerning the communications and energy industries. I have been involved in the economic analysis of issues facing these industries for roughly 30 years. I have provided reports and/or testimony before the Federal Communications Commission (FCC) concerning a range of issues, including market share and churn analyses, cost models, foreclosure and bargaining models, and pole attachments matters. I have recently provided a Declaration in WC Docket No. 05-25 and RM-10593,[1] to which my CV was attached.

2. ***Zarakas-Gately Declaration.*** In the Declaration that I submitted on January 25, 2016 (which I co-authored with Susan M. Gately), we provided market share calculations based on the special access services currently provided by incumbent local exchange

[1] Declaration of William P. Zarakas and Susan M. Gately, appended as Attachment 2 to Comments of Sprint Corporation, WC Docket No. 05-25 (filed Jan. 27, 2016) ("Zarakas-Gately Declaration").

carriers (ILECs) and competitive providers (CPs). In that Declaration, we combined cable companies and competitive local exchange carriers (CLECs) into a single grouping that we referred to as "CLECs."[2] The definition of Competitive Provider used in Appendix A, Mandatory Data Collection, of the Commission's Order on Reconsideration[3] includes wireless providers and other entities subject to the Commission's jurisdiction. We adopted a "narrower" definition to make clear that our market share analysis included only wireline providers of special access; that is, CLECs and cable companies. [4]

3. To be clear, the market share analysis provided in the Zarakas-Gately Declaration includes *all wireline providers of facilities-based special access services, including both CLECs and cable companies.* [5] For example, Table 5 in the Zarakas-Gately Declaration indicates that, based on the data then included in the NORC data enclave, three or more CPs (*i.e.*, CLECs and cable providers) provide special access in roughly 1 percent of the locations (buildings or cell towers) where special access is sold.

4. Based on my forgoing discussion, references to "CLECs" in Tables 4 and 5 of the Zarakas-Gately Declaration can be replaced with "CPs". For example, in Panel 4B, "Breakdown of Census Blocks With ILEC and CLEC Presence" can be replaced with

---

[2] In footnote 2 of the Zarakas-Gately Declaration, we stated that: "We purposely use the term CLEC throughout this Declaration rather than the broader 'competitive provider' term defined in the *Data Collection Order*." Zarakas-Gatley Declaration at 3 n.2.

[3] *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order on Reconsideration, 29 FCC Rcd. 11,657 (2014) ("*Data Collection Order on Reconsideration*").

[4] In practice, non-wireline special access were not included in the relevant special access files and therefore our alternate CLEC definition was intended to add a level of precision that was not strictly required (and inadvertently added confusion).

[5] We excluded special access circuits that were leased by CPs from ILECs in the market analyses provided in the Zarakas-Gately Declaration because, in such cases, the CLEC would be providing special access over ILEC facilities.

"Breakdown of Census Blocks With ILEC and CP Presence." In Panels 5A and 5B, "Number CLEC Providers In Building/Tower" can be replaced with "Number CP Providers In Building/Tower."

5. ***Revised Location Data.*** After the Zarakas-Gately Declaration was filed, NORC updated the building/cell tower location data with new information it received from the Commission. In this Supplemental Declaration, I use the most recent data on building/cell tower locations to calculate the degree to which CPs provide special access services on 1) a building/cell tower location basis and 2) a census block basis.

6. The updated location data indicates that special access is sold in 1,216,977 buildings or cell towers located in 658,487 census blocks. [6] Based on this updated data, CPs (*i.e.*, cable companies and CLECs) together provide special access to 269,389 building/cell tower locations, which account for about 22 percent of all locations where special access services are sold. The updated location data indicates that cable companies provide special access services in 156,395 locations (nearly 13 percent of total locations), and CLECs provide special access service in 118,475 locations (less than 10 percent of total locations). [7]

---

[6] I understand that the updated location data is based on modifications to the algorithm used to determine unique locations based on the address and longitude/latitude data provided by respondents. The count of buildings/cell towers included in the Zarakas-Gately Declaration was based on an algorithm using a similar approach, but resulted in a different count of unique locations.

[7] In some cases, both cable companies and CLECs provide special access services to customers located in the same building/cell tower location. Such overlap explains why the sum (274,870) of building/cell tower locations where cable companies provide special access (156,395=) plus the building/cell tower locations where CLECs provide special access (118,475) slightly exceeds the total number of building/cell tower locations where cable companies and CLECs provide special access services (269,389).

7. Thus, cable companies are providing special access service in approximately 58 percent of building/cell tower locations served by CPs, and CLECs are providing special access service in approximately 44 percent of buildings / cell towers served by CPs.[8]

8. ***Hypothetical Impact of Potential Cable Competition.*** I was asked to analyze the competitive impact of the hypothesis that both ILECs and cable companies may be competitors (actual or potential) at every building/cell tower location where special access is sold, irrespective of whether or not they actually provide special access service at those locations. This assumption would result in a count of at least two special access competitors at each location.

9. Table 1 indicates that this hypothetical analysis results in only one ILEC and one cable company providing special access services (either actually or potentially) in the vast majority of building/cell tower locations where special access services are sold. Specifically, in this hypothetical, one ILEC and one cable company would potentially offer special access services, with no actual competition from CLEC providers, in 1,097,357 of the total 1,216,977 locations where special access services are sold. That is, if cable companies were to sell special access services in every location where the ILEC has special access facilities, there would be an ILEC-cable duopoly in 90 percent of the locations where special access services are sold.

10. The table also indicates that CLECs provide special access in 113,455 building/cell tower locations. Therefore, in this hypothetical, there would be three competitors (*i.e.*, actual or

[8] The calculations are, for cable companies, 156,395 / 269,389 = 58% and, for CLECs, 118,475 / 269,389 = 44%. These percentages do not sum to 100% because, as mentioned above, there are instances of overlap (i.e., CLECs and cable companies each provide service to customers located in the same building / cell tower. Of the 269,389 building/cell tower locations receiving special access service, 150,914 (56%) receive service from cable companies but not CLECs, 112,944 (42%) receive service from CLECs but not cable companies, and the remaining 5,481 (2%) receive service from both cable companies and CLECs.

potential competition from an ILEC, a cable company, and a single CLEC) in only about 9.3 percent of the total building/cell tower locations where special access services are sold. Also in this hypothetical, there would be four or more competitors (*i.e.*, actual or potential competition from an ILEC, a cable company, and two or more CLECs) in only 6,165 (about 0.5 percent) of the building/cell tower locations where special access services are sold. Thus, there would be more than three competitors in roughly 9.8 percent of the building/cell tower locations where special access services are sold.

11. Table 5 in the Zarakas-Gately Declaration indicated that there were three or more actual providers of special access services in less than 3 percent of buildings or cell towers where special access service is provided. [9] Thus, the hypothetical that two competitors would be in place (i.e., an ILEC and a cable company) at every building/cell tower location where special access is sold results in increasing the percentage of building/cell tower locations where there are more than two competitors from the relatively low degree of such competition shown in the Zarakas-Gately Declaration to less than 10 percent.

12. I provide a similar analysis based on census blocks (instead of building/cell tower locations) in Table 2. The table indicates that, in this hypothetical, there would be no more than two competitors (either actual or potentially, an ILEC and a cable company) in 565,621 (or about 86 percent) of census blocks where special access services are sold. Three competitors (*i.e.*, actual or potential competition from an ILEC, a cable company, and a CLEC) would be present in 79,648 (or about 12 percent) of census blocks and four

[9] Calculations in Table 5 in the Zarakas-Gately Declaration were based on our estimate of 843,184 building/cell tower locations where special access is sold. Of these, 19,638 + 5,342 = 24,980 building/cell tower locations had three or more special access providers; 24,890 / 843,184 = 2.96%.

competitors would be present in an additional 13,218 (or about 2 percent) of census blocks.

13. Table 4 in the Zarakas-Gately Declaration indicated that there were three or more actual providers of special access services in roughly 4.2 percent of census blocks where special access service is provided, [10] compared to the three or more competitors being present in about 14.1 percent of census blocks under the hypothetical analysis.

[10] Calculations in Table 4 in the Zarakas-Gately Declaration were based on our estimate of 581,704 census blocks where special access is sold. Of these, 16,412 + 7,853 = 24,265 census blocks had three or more special access providers; 24,265 / 581,704 = 4.2%.

Table 1
Level of Competition in Special Access Market
By Building/Cell Tower with Special Access Demand

Number of Special Access Providers		Buildings / Cell Towers Where Special Access Is Provided	
		#	%
2*	[1]	1,097,357	90.2%
3	[2]	113,455	9.3%
4+	[3]	6,165	0.5%
Total	[4]	1,216,977	100.0%

Sources and Notes:
Table IIA04_Building_Xwalk_Method2 and IIB03_Building_Xwalk_Method2 provide the FCC's updated unique building/cell tower locations.
The FCC data indicates there are a few locations where more than one ILEC or more than one cable company provide special access at the same location. For the purposes of this analysis, the first ILEC and cable company are counted as an ILEC or cable company, respectively. Subsequent ILECs or cable companies are counted as CLECs.
[1]: Assumes that an ILEC and a cable company provide special access service in every building/cell tower where there is special access demand.
[2]: Number of buildings/cell towers where there would be 3 competitors.
[3]: Number of buildings/cell towers where there would be 4 or more competitors.
[4] = sum([1]:[3]).

Table 2
Level of Competition In Special Access Market
By Census Block With Special Access Demand

Number of Special Access Providers		Census Blocks Where Special Access Is Provided	
		#	%
2*	[1]	565,621	85.9%
3	[2]	79,648	12.1%
4+	[3]	13,218	2.0%
Total	[4]	658,487	100.0%

Sources and Notes:
Table IIA04_Building_Xwalk_Method2 and IIB03_Building_Xwalk_Method2 provide the FCC's updated unique building/cell tower locations, and assigned each unique location to a census block.
The FCC data indicates there are a few locations where more than one ILEC or more than one cable company provide special access at the same location. For the purposes of this analysis, the first ILEC and cable company are counted as an ILEC or cable company, respectively. Subsequent ILECs or cable companies are counted as CLECs.
[1]: Assumes that an ILEC and a cable company provide special access service in every building/cell tower where there is special access demand.
[2]: Number of census blocks where there would be 3 competitors.
[3]: Number of census blocks where there would be 4 or more competitors.
[4] = sum([1]:[3]).